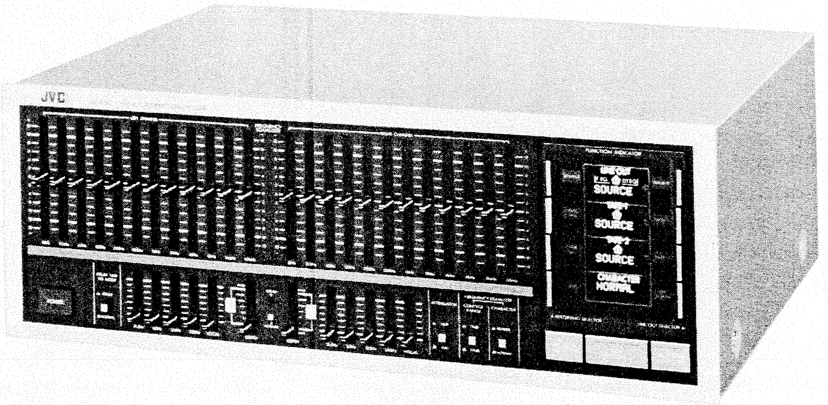
JVC

SERVICE MANUAL

MODEL
SEA-R7

S.E.A. GRAPHIC EQUALIZER



No. 2661
JAN. 1983

Safety Precaution

1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual.
   Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazards.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.
5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connet a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resister connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).

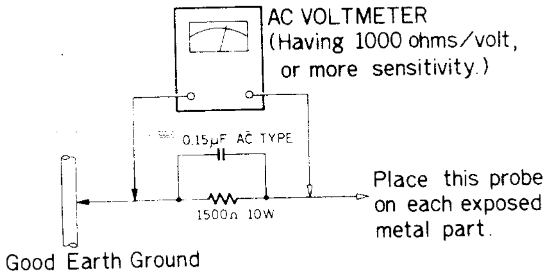

AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15μF AC TYPE
1500Ω 10W
Place this probe on each exposed metal part.
Good Earth Ground

Fig. 1

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1. Specifications

Input section

SEA INPUT : Input impedance 47 kohms

TAPE MONITOR : Input impedance 47 kohms

Output section

SEA OUTPUT : Output impedance 100 ohms

TAPE REC : Output impedance 100 ohms (during SEA recording)

Rated output : 2 V RMS (SEA system flat)

Max. output : 10 V RMS (SEA system flat)

Total harmonic distortion : 0.001 % (20 Hz – 20 kHz, rated output)

Intermodulation distortion : 0.0015 % (SEA system flat)

Gain : 0 dB with SEA RECORDING switch set to DEFEAT
0 dB with SEA RECORDING switch set to ON
-6 dB with ATTENUATOR switch set to ON

Frequency response : 10 Hz – 100 kHz (+0, -2 dB)

S/N ratio : 118 dB (at rated output, IHF A-network short-circuited)

Control section

F.EQ center frequencies : 16 Hz, 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz, 32 kHz

F.EQ control range : ±6 dB, ±12 dB

D.T.EQ center frequencies : 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, VOCAL (700 Hz)

Reverberation time : 0 – 1.2 sec.

General

Dimensions : 435(W) x 157(H) x 328(D) mm

Weight : 5.5 kg

Accessories : 2 pairs of connection cords (1.2 m)

Note:

IHF: Initials of Institute of High Fidelity in U.S.A.

Design and specifications subject to change without notice.

POWER SPECIFICATIONS

	CANADA & USA	EUROPE, U.K. & AUSTRALIA	MILITARY MARKET & OTHER AREA
Power Supply	AC 120 V∿, 60 Hz	AC 110/120/ 220/240 V∿ selectable, 50 Hz	AC 110/120/ 220/240 V∿ selectable, 50/60 Hz
Power Consumption	25 watts	25 watts	25 watts
Power Outlet	Fitted	Not fitted	Fitted
Line Voltage Selector	Not fitted	Fitted	Fitted

2. Features

- 5-element delay time equalizer (D.T.EQ) to control reverberations in each frequency band.
  With 5 frequency ranges which are important for sound energy balance at middle and low frequencies, it becomes possible to control the reverberation level and time in the required frequency band. This provides the following effects:
  (1) Creating ideal reverberation characteristics simulating the effect in a concert hall, giving a good feeling of sound energy at ultra low frequencies.
  (2) Recreating the different reverberation characteristics of different concert halls to correspond to sound sources.
  (3) Reproducing a wide variety of sounds in combination with the frequency equalizer (F.EQ).
- 12-element frequency equalizer with excellent basic performance, ultra low distortion, high S/N ratio, etc.
- Full-function graphic equalizer
  REC/PB jacks for 2 tape decks and recording selector
  - Switches, SEA recording switch, character F.EQ
  - Switches, F.EQ control range select switch, delay time EQ mode switch, frequency and delay time EQs, independent defeat switches
- Function indicator mechanism with large 2-color FL display

3. Names of Parts and Their Functions

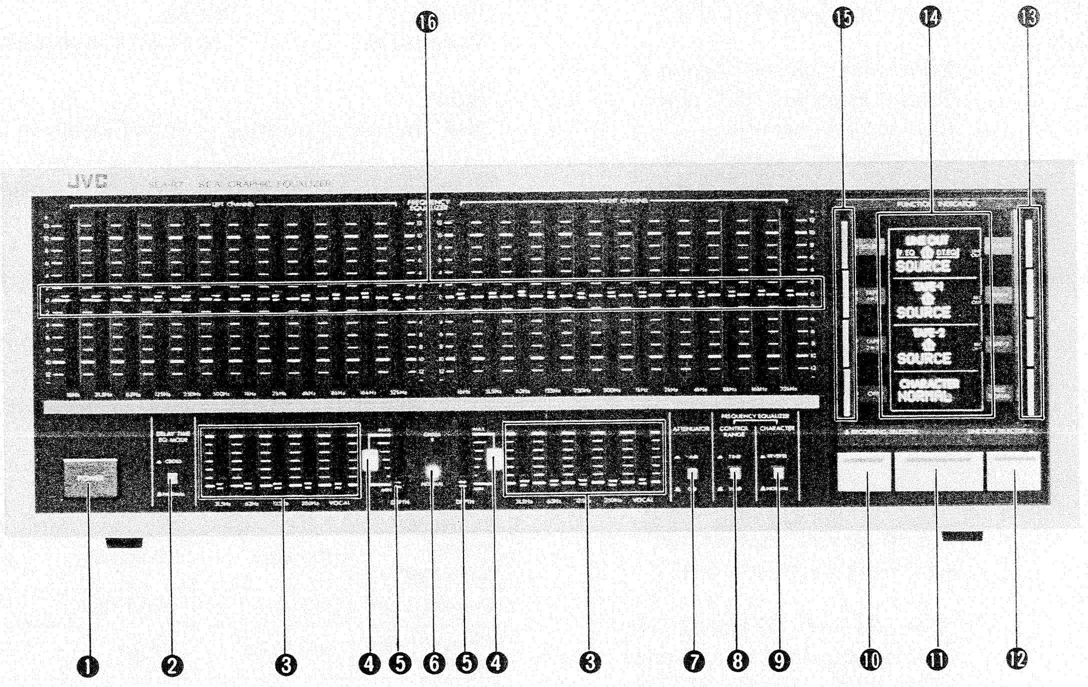


Fig. 2

① POWER switch

② DELAY TIME EQ MODE switch

NORMAL (■): Set to this position to obtain the feeling of being in a big hall without affecting the localization of the sound image.

CROSS (▬): Set to this position to add the reverberation sound of the left channel to the right channel and vice versa. You will obtain a different effect from that in the NORMAL position.
Certain sources give you an expansion before and after of sound.

Note: As the cross effect has been already applied to some sources, set this switch to NORMAL or CROSS to obtain the most pleasing effect.

③ DELAY TIME EQUALIZER controls

The low frequency sound spectrum is divided into five bands with center frequencies from 31.5 Hz to 700 Hz; controls are provided so that you can add reverberation to each of these frequency bands.
When any of controls is set to MIN, there is no reverberation and when it is set to MAX, the level of the reverberation signal is maximum and the reverberation time is 1.2 seconds (with DEPTH knob set to MAX).

④ DEPTH indicator

When the DEPTH knob is slid from MIN to MAX, this indicator changes from green to orange then red.

⑤ DEPTH knob

Used to control the reverberation time. It is possible to set between 0.04 seconds and 1.2 seconds (with D.T.EQ level volume set to MAX).

⑥ DELAY TIME EQ MODE indicator

⑦ ATTENUATOR switch

-6 dB (▬): Set to this position to attenuate sound with a large dynamic range such as a live performance or high-level signals.

0 dB (■): Set to this position for normal use.

⑧ CONTROL RANGE switch

±6 dB (▬): Set to this position to compensate relatively small response deviations of an amplifier or cartridge.

±12 dB (■): Set to this position to compensate for large variations in response, such as those due to listening rooms and speakers.

⑨ CHARACTER switch

NORMAL (■): Set to this position for normal use. ±12 dB control is possible by moving the F.EQ controls.

REVERSE (▬): Set to this position to obtain reverse response; this is useful when using S.E.A. to eliminate tape hiss.

⑩ FREQUENCY EQ ON-DEFEAT switch

Press this switch when frequency compensation is not required and the F.EQ FUNCTION INDICATOR will go out. For frequency compensation, press this switch again and the F.EQ will light.

⑪ SEA RECORDING ON-OFF switch

Press this switch to record SEA-compensated signals and set so that the TAPE-1 and TAPE-2 F.EQ and D.T.EQ FUNCTION INDICATORs will light.
To disengage SEA recording, press this switch again.

Note: Even when this switch is pressed, if the F.EQ or the D.T.EQ indicator is not lit, the SEA recording will not be performed. As it is possible to use either the F.EQ or the D.T.EQ, you can select either or both according to your requirements.

⑫ DELAY TIME EQ ON-DEPEAT switch

Press this switch when reverberation compensation is not required. The D.T.EQ FUNCTION INDICATOR will go out. To compensate reverberation, press this switch again and the D.T.EQ will light.

If used with F.EQ and D.T.EQ indicators not lit and this switch in the DEFEAT position, set the POWER switch to off.

⑬ LINE OUT SELECTOR switches

SOURCE: Press this switch to listen to the program source selected by the amplifier.

TAPE-1: Press this switch to play tape deck 1.

TAPE-2: Press this switch to play tape deck 2.

REC SIGNAL: Press this switch to monitor the signal after it has been recorded.

⑭ FUNCTION INDICATOR

Indicates what kind of signals are available at each output terminal and whether they are compensated (equalized) by F.EQ or D.T.EQ.

Note: When the indication is not clear, press the RECORDING SELECTOR or LINE OUT SELECTOR switch again.

⑮ RECORDING SELECTOR switches

SOURCE: Press this switch to record the program source connected to the amplifier.

1 ► 2: Press this switch to dub from tape deck 1 to tape deck 2.

2 ► 1: Press this switch to dub from tape deck 2 to tape deck 1.

OFF: Press this switch when not recording.

⑯ FREQUENCY EQUALIZER controls

The SEA-R7 Graphic Equalizer divides the sound spectrum into 12 frequency bands with center frequencies of from 16 Hz to 32 kHz at intervals of one octave. When any of the controls is set to its center "0" position, the frequency response in the frequency band is flat. The response in each band can be varied by ±12 dB (or ±6 dB) by raising or lowering the control.

16 Hz: This frequency range is felt rather than heard. Effective in reducing very low frequency noise and intermodulation distortion caused by record surface warps. Lowering this knob obtains the same effect as a sub-sonic filter.

31.5 Hz: Lowest frequency range for recorded sound on the disc. Reproduce the very low bass sound by raising the knob, obtaining that solid and substantial "being-there" feeling. When lowered, it functions as low-cut filter and eliminates hum and rumble.

63 Hz: Raise to emphasize the very low bass response of organs, drums, and contrabass. It produces stable and solid sound by raising the knob and eliminates the unclear sound response of low frequencies by lowering the knob.

125 Hz: Raise the knob to obtain a more expanded low sound. Lower the knob to eliminate unclear sound caused by large spaces in listening rooms.

250 Hz: Lower the knob to reduce the reflected sound in a live listening room or to eliminate unclear sound caused in small listening rooms.

500 Hz: This frequency range is the base on which music is constructed. Raise this knob to really put a punch in your music.

1 kHz: Most effective in emphasizing or deemphasizing the human voice. Raise the knob to cause the vocalist to be brought to the foreground, or lower for causing it to recede into the background.

2 kHz: This frequency stimulates the human ear. If the music sounds hard or metallic, lower the knob.

4 kHz: Raise this knob slightly so that the tension of strings can be sensed and a vigorous sound reproduction can be obtained. Lower the knob to obtain more fatigue-free listening.

8 kHz: Boost to add clarity to winds and strings. Moving this control varies the tonal expression, influencing the subtleties of the music.

16 kHz: Boosting this frequency range properly adds to the delicacy of highs, with cymbals and triangles resounding in a more ear-pleasing manner, and provides a feeling of extension. This control can also be used to compensate for cartridge response since most moving-magnet cartridges have their resonance peaks in the frequency range from 10 kHz to 20 kHz.

32 kHz: High frequencies exceeding audible frequency range. Use this knob to control extremely delicate sound or to cut unnecessary super-high sound.

4. Description of New Technology

4-(1) Operation of delay time equalizer

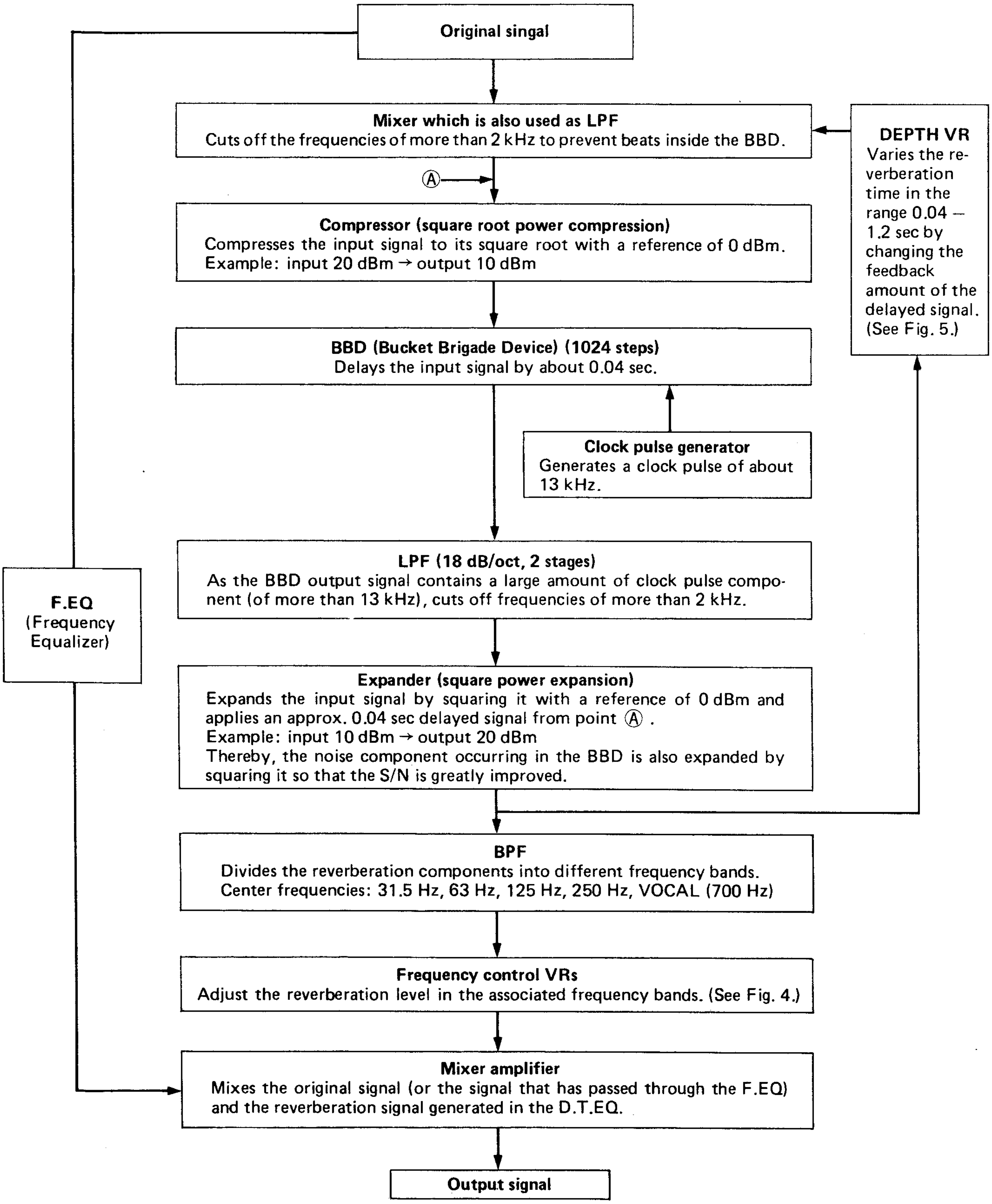

Original singal
Mixer which is also used as LPF
Cuts off the frequencies of more than 2 kHz to prevent beats inside the BBD.
Ⓐ
Compressor (square root power compression)
Compresses the input signal to its square root with a reference of 0 dBm. Example: input 20 dBm → output 10 dBm
BBD (Bucket Brigade Device) (1024 steps)
Delays the input signal by about 0.04 sec.
Clock pulse generator
Generates a clock pulse of about 13 kHz.
LPF (18 dB/oct, 2 stages)
As the BBD output signal contains a large amount of clock pulse component (of more than 13 kHz), cuts off frequencies of more than 2 kHz.
Expander (square power expansion)
Expands the input signal by squaring it with a reference of 0 dBm and applies an approx. 0.04 sec delayed signal from point Ⓐ. Example: input 10 dBm → output 20 dBm Thereby, the noise component occurring in the BBD is also expanded by squaring it so that the S/N is greatly improved.
BPF
Divides the reverberation components into different frequency bands. Center frequencies: 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, VOCAL (700 Hz)
Frequency control VRs
Adjust the reverberation level in the associated frequency bands. (See Fig. 4.)
Mixer amplifier
Mixes the original signal (or the signal that has passed through the F.EQ) and the reverberation signal generated in the D.T.EQ.
Output signal
DEPTH VR
Varies the reverberation time in the range 0.04 – 1.2 sec by changing the feedback amount of the delayed signal. (See Fig. 5.)
F.EQ
(Frequency Equalizer)

Fig. 3

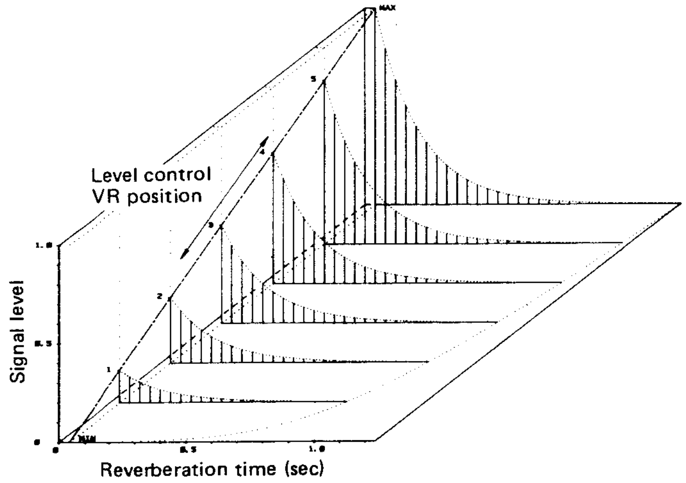


Fig. 4 Characteristics of change in reverberation signal level

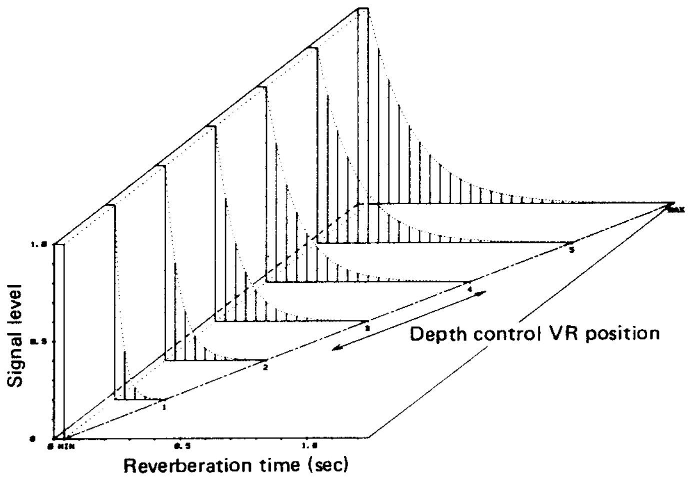


Fig. 5 Characteristics of change in decay time of reverberation signal

4-(2) D.T.EQ mode switch

NORMAL: The Lch reverberation component is added to Lch signal and the Rch reverberation component to Rch signal.

CORSS: The Lch reverberation component is added to Rch signal and the Rch reverberation component to Lch signal, each passing through an inverter amplifier.

4-(3) Relationship between displayed characters and pin voltages of FL display tubes

LINE OUT
F.EQ ⇧ D.T.EQ
▒▒▒▒▒▒▒

Section A

Display	Pin No.
LINE OUT	3
⇧	25
F.EQ	29
D.T.EQ	28

ON: H
OFF: L

Display \ Pin No.	21	22	23	24	25	26	27
SOURCE	L	H	L	L	H	L	H
TAPE-1	L	L	H	L	H	H	L
TAPE-2	L	H	L	H	H	H	L
●●●	H	L	L	L	L	L	L

TAPE-1
F.EQ ⇧ D.T.EQ
▒▒▒▒▒▒▒

Section B

Display	Pin No.
TAPE-1	3
⇧	18
F.EQ	20
D.T.EQ	19

ON: H
OFF: L

Display \ Pin No.	15	16	17	18
SOURCE	L	L	H	H
TAPE-2	L	H	L	H
●●●	H	L	L	L

TAPE-2
F.EQ ⇧ D.T.EQ
▒▒▒▒▒▒▒

Section C

Display	Pin No.
TAPE-2	3
⇧	12
F.EQ	14
D.T.EQ	13

ON: H
OFF: L

Display \ Pin No.	9	10	11	12
SOURCE	L	L	H	H
TAPE-1	L	H	L	H
●●●	H	L	L	L

CHARACTER
▒▒▒▒▒▒▒

Section D

Display	Pin No.
CHARACTER	3

Display \ Pin No.	4	6	7	8
NORMAL	L	L	H	H
REVERSE	L	H	H	L
●●●	H	L	L	L

NOTE H: about +4 V
L: about −18.5 V

Fig. 6

5. Main Parts Location

5-(1) Top view

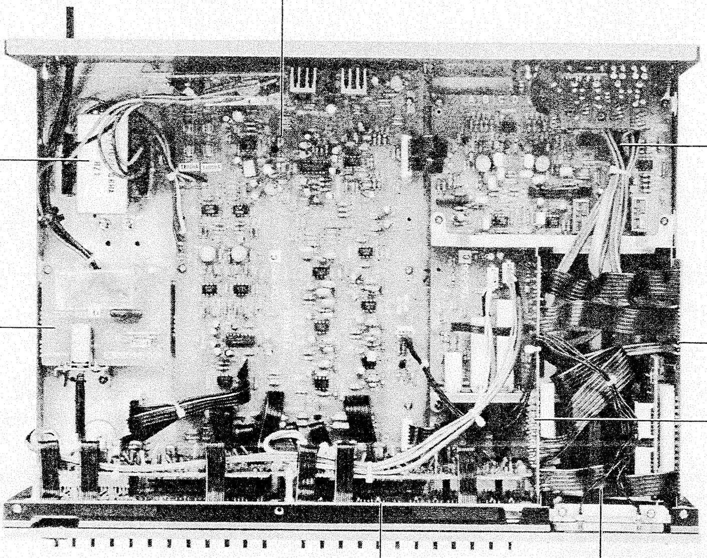

D.T. Equalizer P.C. Board Ass'y
TXX-428□-1
Power Transformer
See back cover.
F. Equalizer Amp. P.C. Board Ass'y
TAC-536□
Fuse & Switch P.C. Board Ass'y
TXX-429□-1
Line Out Selector P.C. Board Ass'y
TXX-427□-3
Recording Selector P.C. Board Ass'y
TXX-427□-4
F. Equalizer VR P.C. Board Ass'y
TXX-426B
F.L. P.C. Board Ass'y
TXX-427□-5

Fig. 7

5-(2) Front view

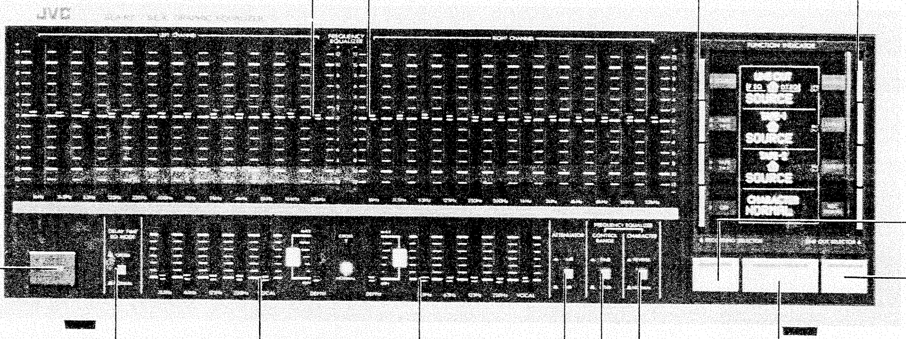

E69912-001
Slide knob
E69909-001
Pushbutton
EFP-SEAR7E
Front Panel Ass'y
E302523-002
Pushbutton
E302523-001
Pushbutton
E302523-003
Pushbutton
E69907-001
Pushbutton
E69912-002
Slide knob
E69907-004
Pushbutton
E302524-001
Pushbutton
JVC

Fig. 8

5-(3) Rear view

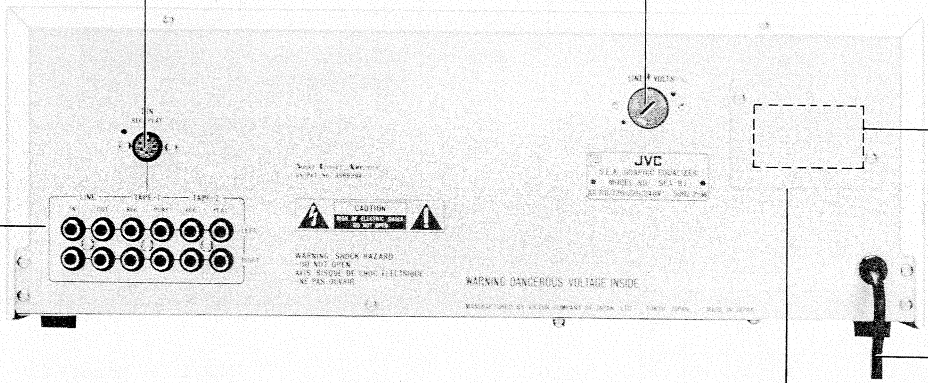

DIN Socket
See back cover.
Voltage Selector
See back cover.
AC Socket
See back cover.
EMN00TV-402A
Pin Jack Ass'y
Power Cord
See back cover.
Mask Plate
See back cover.
JVC
CAUTION
WARNING DANGEROUS VOLTAGE INSIDE

Fig. 9

6. Removal Procedures

6-(1) Removal of LINE OUT selector board (TXX-427-3)

1. Remove the 36 slide knobs from the front panel then remove the front panel.
2. Pull out one push knob ("SOURCE") of the LINE OUT selector at its OFF setting.
3. Remove 4 screws ① – ④ shown in Fig. 10 and take out the switch bracket.

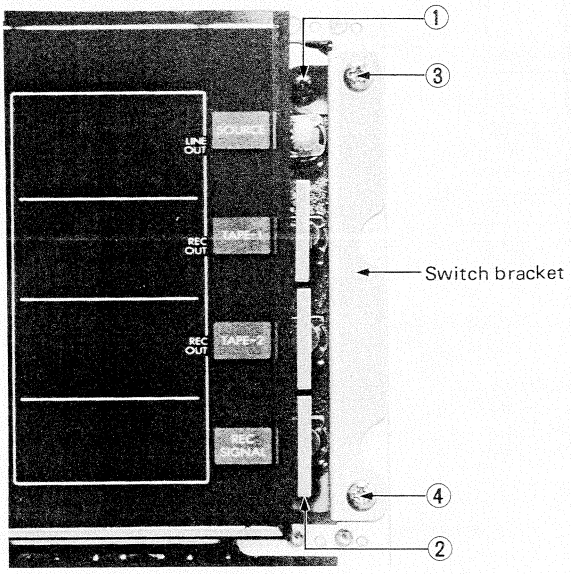

①
③
LINE OUT
SOURCE
REC OUT
TAPE-1
Switch bracket
REC OUT
TAPE-2
REC SIGNAL
④
②

Fig. 10

4. Remove the nylon latch shown in Fig. 11 and lift the LINE OUT selector board.

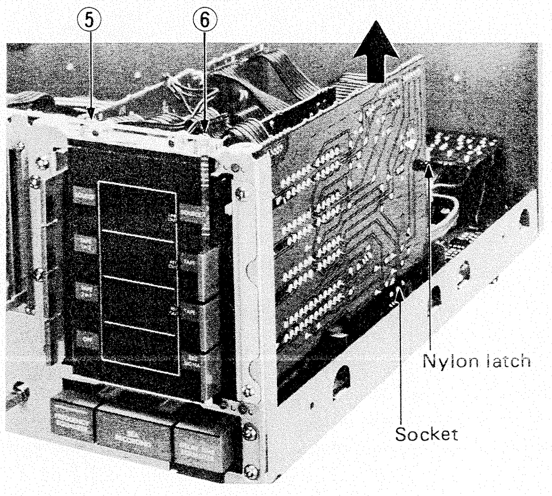

⑤
⑥
Nylon latch
Socket

Fig. 11

Notes:

1. For easier removal of the push knob, push out its section which engages with the switch using a screwdriver, etc.
2. This LINE OUT selector board is connected via the sockets to the EQ board on the lower side. When removing the LINE OUT selector board, lift its down side slightly using a screwdriver, etc.

6-(2) Removal of FL (fluorescent display tube) board (TXX-427-5)

1. Remove the LINE OUT selector board.
2. Remove 2 screws ⑤ and ⑥ shown in Fig. 11 and take out the edge lighting FL screen (attached with both-sides adhesive tape).
3. Remove 2 screws ⑦ and ⑧ shown in Fig. 12.

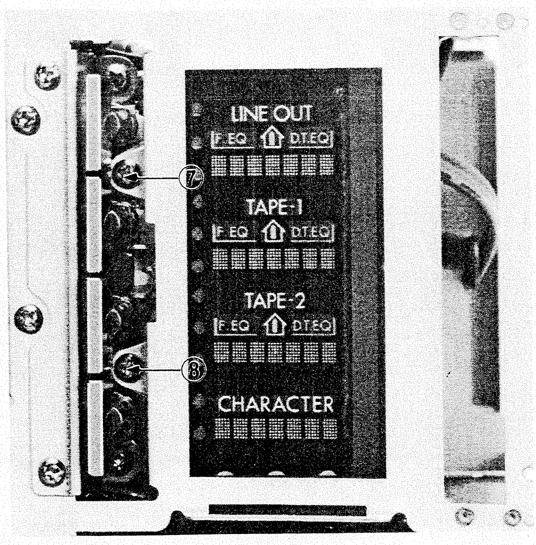

LINE OUT
F.EQ
D.T.EQ
⑦
TAPE-1
F.EQ
D.T.EQ
TAPE-2
F.EQ
D.T.EQ
⑧
CHARACTER

Fig. 12

4. Remove the FL board by pushing it off the FL brackets in the direction of the arrow as shown in Fig. 13.

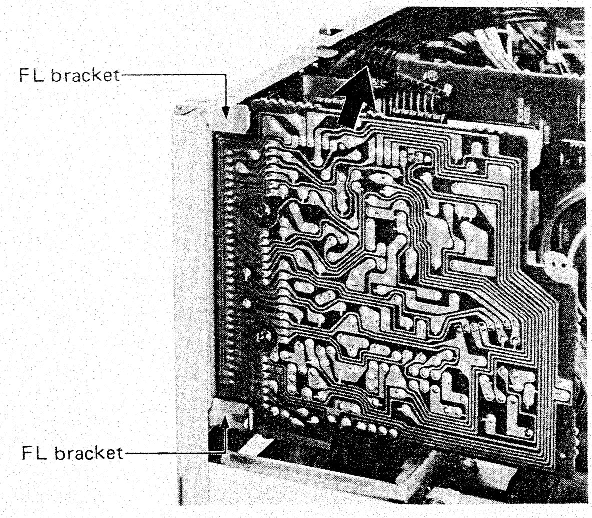
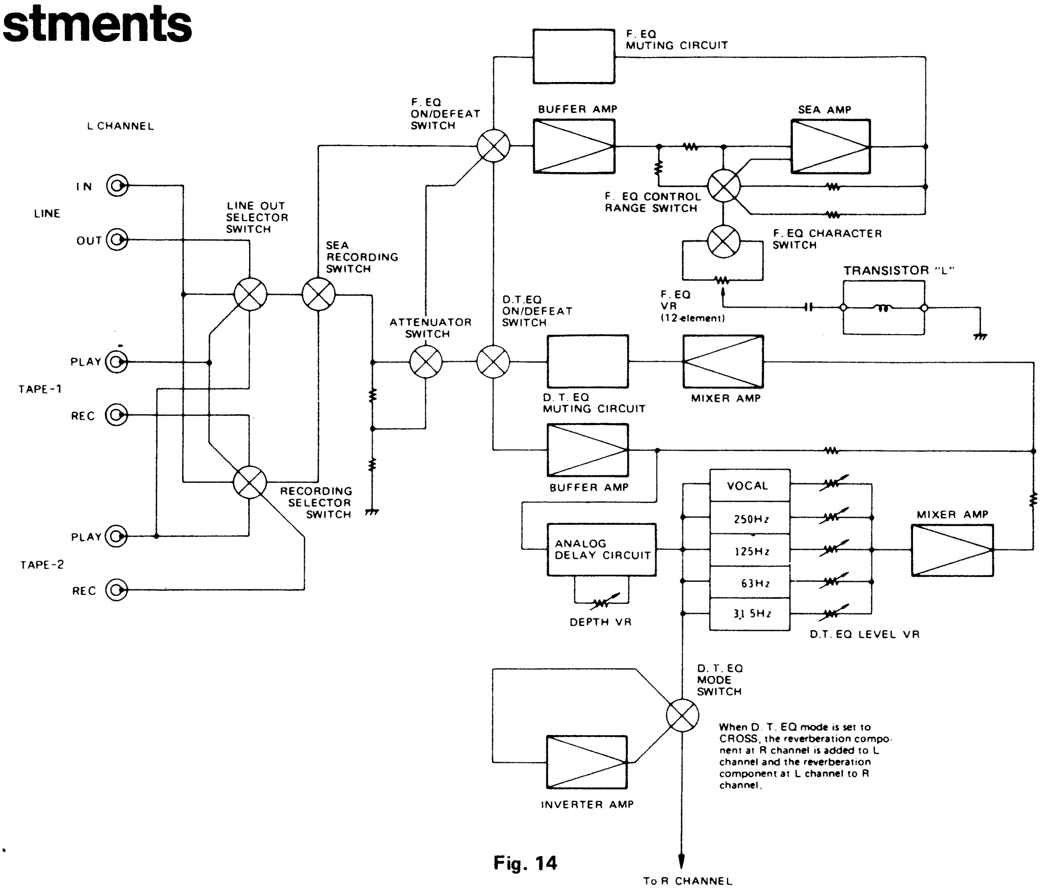

FL bracket
FL bracket

Fig. 13

5. Pull out the FL display tubes, being careful not to damage them.

7. Adjustments


F.EQ MUTING CIRCUIT
L CHANNEL
F.EQ ON/DEFEAT SWITCH
BUFFER AMP
SEA AMP
LINE
IN
OUT
LINE OUT SELECTOR SWITCH
SEA RECORDING SWITCH
F. EQ CONTROL RANGE SWITCH
F. EQ CHARACTER SWITCH
TRANSISTOR "L"
F.EQ VR (12 element)
D.T.EQ ON/DEFEAT SWITCH
ATTENUATOR SWITCH
TAPE-1
PLAY
REC
D. T. EQ MUTING CIRCUIT
MIXER AMP
BUFFER AMP
RECORDING SELECTOR SWITCH
VOCAL
250Hz
125Hz
63Hz
31.5Hz
MIXER AMP
ANALOG DELAY CIRCUIT
DEPTH VR
D.T. EQ LEVEL VR
TAPE-2
PLAY
REC
D. T. EQ MODE SWITCH
INVERTER AMP
To R CHANNEL

When D. T. EQ mode is set to CROSS, the reverberation component at R channel is added to L channel and the reverberation component at L channel to R channel.

Fig. 14

7-(1) Center voltage adjustment

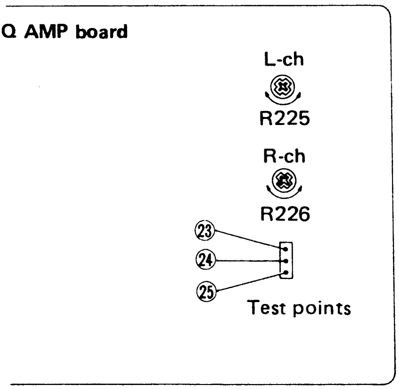

TAC-536 F.EQ AMP board
L-ch
R225
R-ch
R226
㉓
㉔
㉕
Test points

Fig. 15

Measuring instrument:
Use an instrument which permits reading of less than DC 1 mV.

	Adj. point	Measuring test points	Adj./check voltage
Lch	R225	Between ㉓ and ㉔, (GND)	0 V
	Check	Between ㉓ and ㉔, (GND)	Less than ±1.5 mV
Rch	R226	Between ㉕ and ㉔, (GND)	0 V
	Check	Between ㉕ and ㉔, (GND)	Less than ±1.5 mV

7-(2) Gain adjustment

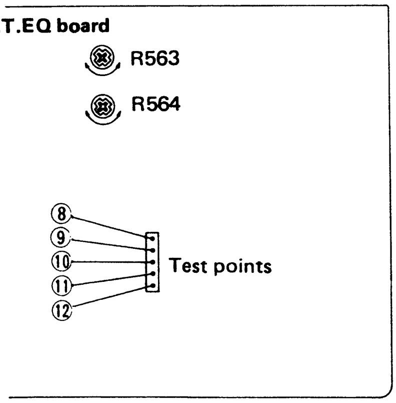

TXX-428-1 D.T.EQ board
R563
R564
⑧
⑨
⑩
⑪
⑫
Test points

Fig. 16

Preparations:
1. Set all D.T.EQ VR knobs to "MIN".
2. Set the D.T.EQ switch to "ON" and the LINE OUT selector to "SOURCE".
3. Apply a 100 Hz signal of -10 dBm ≑ 0.245 V to the LINE IN jacks.

	Adj. point	Adjustment
Lch	R563	Adjust R563 so that the voltage between TP ⑧ and ⑩ is equal to that between TP ⑪ and ⑩ .
Rch	R564	Adjust R564 so that the voltage between TP ⑨ and ⑩ is equal to that between TP ⑫ and ⑩ .

8. Connection Diagram

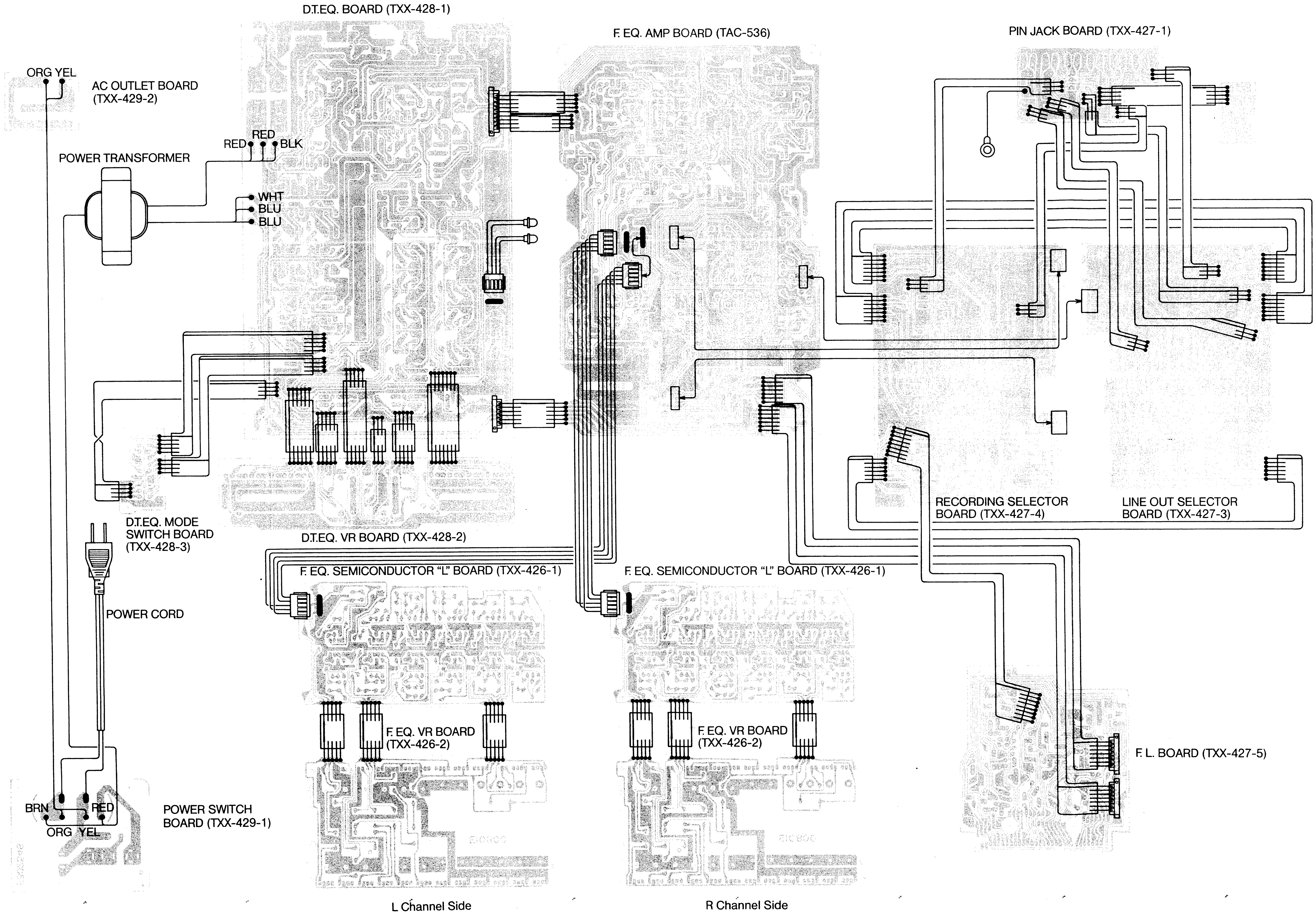

D.T.EQ. BOARD (TXX-428-1)
F. EQ. AMP BOARD (TAC-536)
PIN JACK BOARD (TXX-427-1)
ORG YEL
AC OUTLET BOARD (TXX-429-2)
RED
RED
BLK
POWER TRANSFORMER
WHT
BLU
BLU
D.T.EQ. MODE SWITCH BOARD (TXX-428-3)
D.T.EQ. VR BOARD (TXX-428-2)
RECORDING SELECTOR BOARD (TXX-427-4)
LINE OUT SELECTOR BOARD (TXX-427-3)
F. EQ. SEMICONDUCTOR "L" BOARD (TXX-426-1)
F. EQ. SEMICONDUCTOR "L" BOARD (TXX-426-1)
POWER CORD
F. EQ. VR BOARD (TXX-426-2)
F. EQ. VR BOARD (TXX-426-2)
F. L. BOARD (TXX-427-5)
BRN
RED
ORG YEL
POWER SWITCH BOARD (TXX-429-1)
L Channel Side
R Channel Side

Fig. 17

9. Exploded View

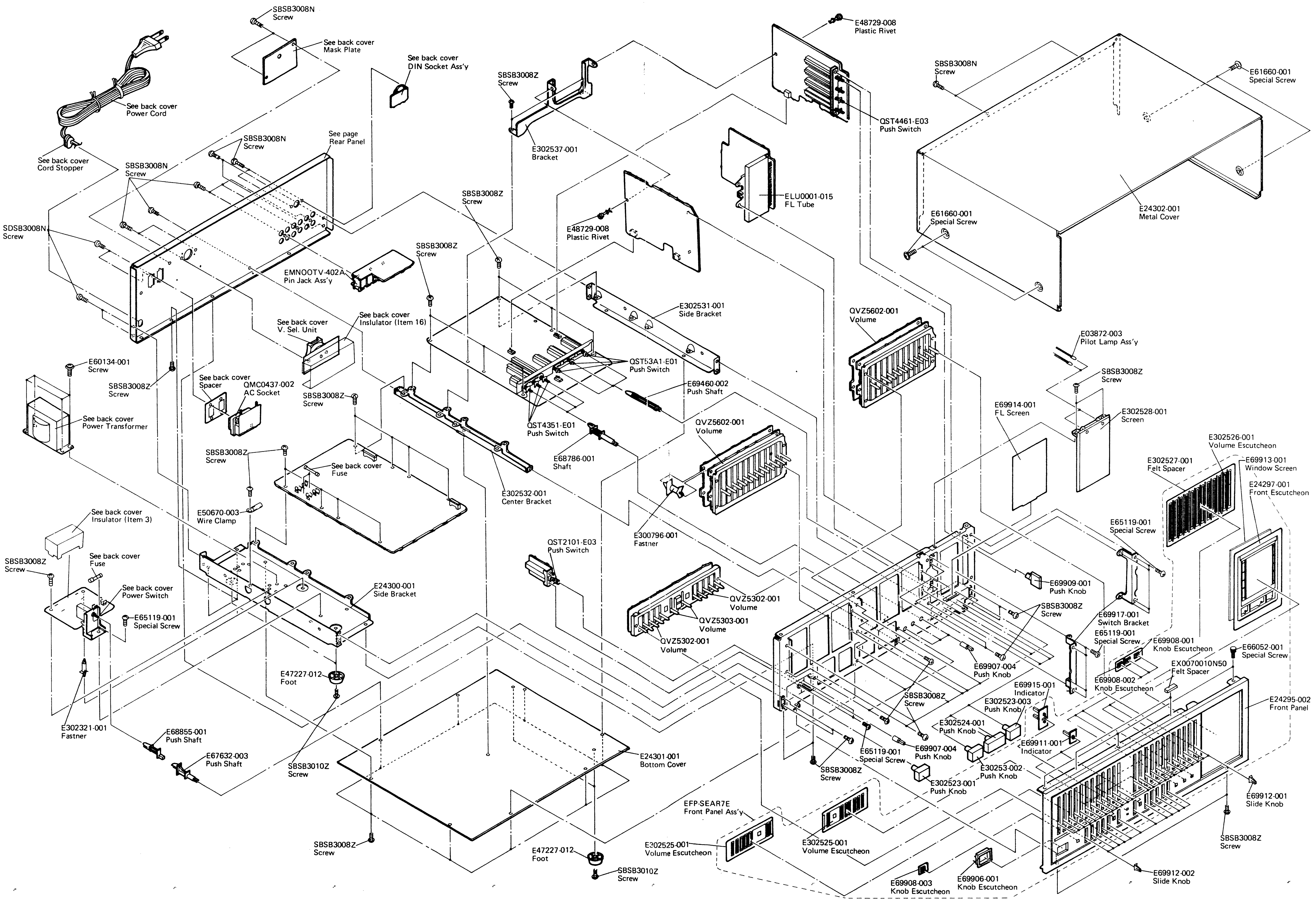
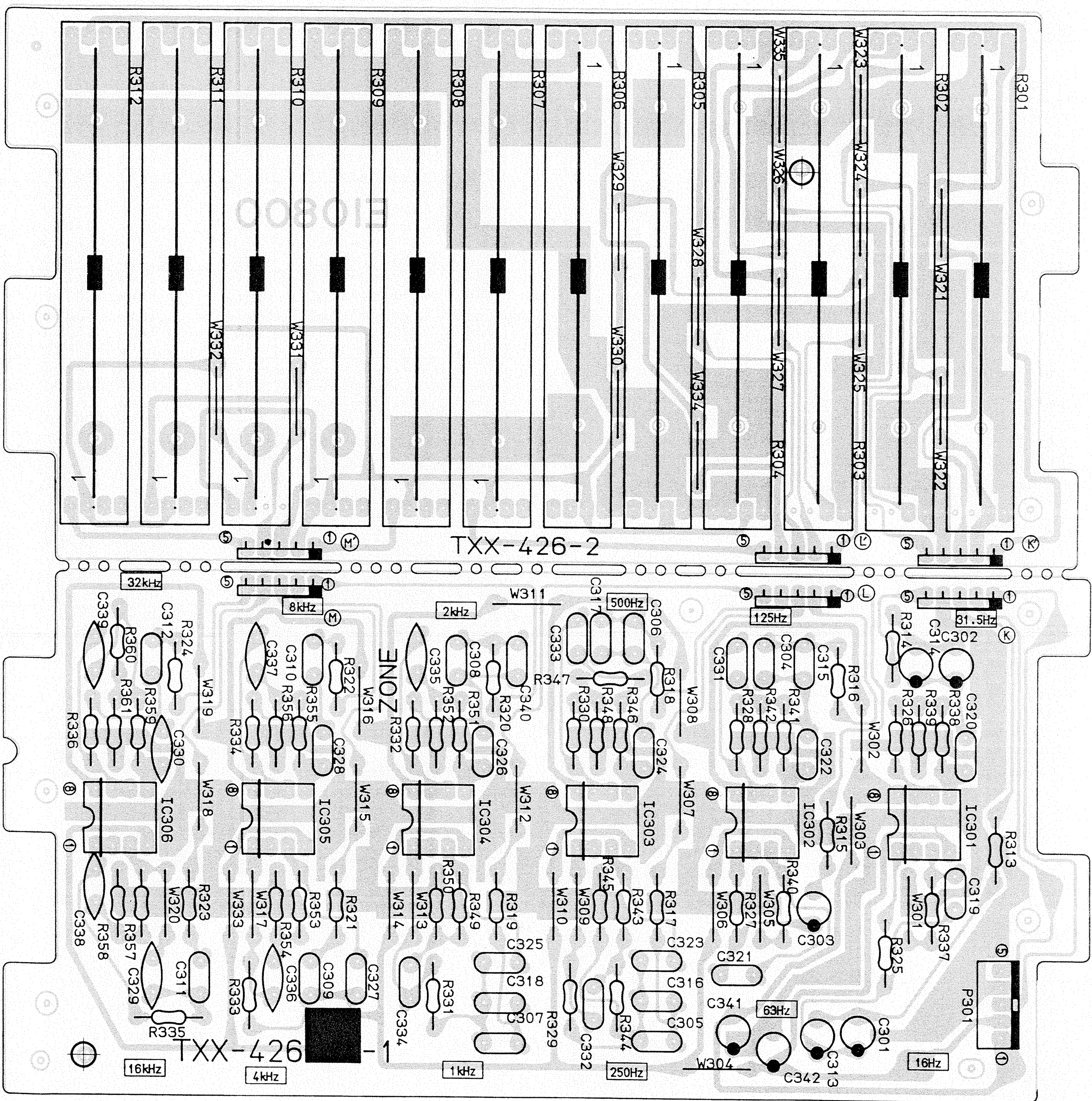

SBSB3008N
Screw
See back cover
Mask Plate
See back cover
DIN Socket Ass'y
See back cover
Power Cord
See back cover
Cord Stopper
SBSB3008N
Screw
See page
Rear Panel
SBSB3008N
Screw
SDSB3008N
Screw
SBSB3008Z
Screw
E302537-001
Bracket
E48729-008
Plastic Rivet
QST4461-E03
Push Switch
SBSB3008N
Screw
E61660-001
Special Screw
ELU0001-015
FL Tube
E48729-008
Plastic Rivet
SBSB3008Z
Screw
E61660-001
Special Screw
E24302-001
Metal Cover
SBSB3008Z
Screw
EMNOOTV-402A
Pin Jack Ass'y
E302531-001
Side Bracket
QVZ5602-001
Volume
See back cover
V. Sel. Unit
See back cover
Inslulator (Item 16)
E03872-003
Pilot Lamp Ass'y
E60134-001
Screw
SBSB3008Z
Screw
See back cover
Spacer
QMC0437-002
AC Socket
SBSB3008Z
Screw
QST53A1-E01
Push Switch
E69460-002
Push Shaft
SBSB3008Z
Screw
See back cover
Power Transformer
QST4351-E01
Push Switch
QVZ5602-001
Volume
E69914-001
FL Screen
E302528-001
Screen
SBSB3008Z
Screw
See back cover
Fuse
E68786-001
Shaft
E302526-001
Volume Escutcheon
E302527-001
Felt Spacer
E69913-001
Window Screen
E24297-001
Front Escutcheon
E50670-003
Wire Clamp
E302532-001
Center Bracket
See back cover
Insulator (Item 3)
E300796-001
Fastner
E65119-001
Special Screw
QST2101-E03
Push Switch
SBSB3008Z
Screw
See back cover
Fuse
E69909-001
Push Knob
See back cover
Power Switch
E24300-001
Side Bracket
QVZ5302-001
Volume
SBSB3008Z
Screw
E65119-001
Special Screw
QVZ5303-001
Volume
E69917-001
Switch Bracket
QVZ5302-001
Volume
E65119-001
Special Screw
E69908-001
Knob Escutcheon
E66052-001
Special Screw
EX0070010N50
Felt Spacer
E69907-004
Push Knob
E47227-012
Foot
E69908-002
Knob Escutcheon
E69915-001
Indicator
E24295-002
Front Panel
SBSB3008Z
Screw
E302523-003
Push Knob
E302321-001
Fastner
E68855-001
Push Shaft
E302524-001
Push Knob
E69911-001
Indicator
E67632-003
Push Shaft
SBSB3010Z
Screw
E24301-001
Bottom Cover
E65119-001
Special Screw
E69907-004
Push Knob
E30253-002
Push Knob
SBSB3008Z
Screw
E302523-001
Push Knob
E69912-001
Slide Knob
EFP-SEAR7E
Front Panel Ass'y
E302525-001
Volume Escutcheon
E302525-001
Volume Escutcheon
SBSB3008Z
Screw
SBSB3008Z
Screw
E47227-012
Foot
SBSB3010Z
Screw
E69908-003
Knob Escutcheon
E69906-001
Knob Escutcheon
E69912-002
Slide Knob

Fig. 18

10. Printed Circuit Board Ass'y and Parts List

10-(1) TXX-426A F. EQ VR P.C. board ass'y


R312
R311
R310
R309
R308
R307
R306
R305
W335
W323
R302
R301
W336
W324
W329
W328
W321
W332
W331
W330
W334
W327
W325
R304
R303
W322
TXX-426-2
32kHz
8kHz
2kHz
W311
500Hz
125Hz
31.5Hz
C339
C312
R324
R360
R361
R359
R336
C330
W319
C337
C310
R356
R355
R322
R334
C328
W316
ZONE
R332
C335
C308
R352
R351
R320
C326
C340
C333
C317
C306
R347
R330
R348
R346
R318
C324
W308
C331
C304
C315
R316
R328
R342
R341
C322
W302
R314
C314
C302
R326
R339
R338
C320
W318
IC306
W315
IC305
IC304
W312
IC303
W307
IC302
R315
W303
IC301
R313
C338
R358
R357
W320
R323
W333
W317
R354
R353
R321
W314
W313
R350
R349
R319
W310
W309
R345
R343
R317
W306
R327
R340
W305
C303
W301
R337
C319
R325
C329
C311
R333
C336
C309
C327
C334
R331
C325
C318
C307
R329
C332
R344
C323
C316
C305
C321
C341
63Hz
C342
C313
C301
P301
R335
TXX-426 -1
16kHz
4kHz
1kHz
250Hz
W304
16Hz

ICs

ITEM	PART NUMBER	DESCRIPTION	
			MAKER
IC301	NJM4560D-X		JRC
IC302	NJM4560D-X		JRC
IC303	NJM4560D-X		JRC
IC304	NJM4560D-X		JRC
IC305	NJM4560D-X		JRC
IC306	NJM4560D-X		JRC

Capacitors

ITEM	PART NUMBER	DESCRIPTION		
C301	QEB61EM-475	4.7UF	25V	L.L.C.E.
C302	QEB61EM-225	2.2UF	25V	L.L.C.E.
C303	QEB61EM-225	2.2UF	25V	L.L.C.E.
C304	QFV81HJ-105	1UF	50V	FILM
C305	QFV81HJ-474	0.47UF	50V	FILM
C306	QFV81HJ-224	0.22UF	50V	FILM
C307	QFV81HJ-124	0.12UF	50V	FILM
C308	QFV81HJ-473	0.047UF	50V	FILM
C309	QFV81HJ-333	0.033UF	50V	FILM
C310	QFV81HJ-153	0.015UF	50V	FILM
C311	QFV81HJ-822	8200PF	50V	FILM
C312	QFV81HJ-392	3900PF	50V	FILM
C313	QEB61EM-335	3.3UF	25V	L.L.C.E.
C314	QEB61EM-225	2.2UF	25V	L.L.C.E.
C315	QFV81HJ-104	0.1UF	50V	FILM
C316	QFV81HJ-273	0.027UF	50V	FILM
C317	QFV81HJ-273	0.027UF	50V	FILM
C318	QFV81HJ-223	0.022UF	50V	FILM
C319	QFV81HJ-473	0.047UF	50V	FILM
C320	QFV81HJ-473	0.047UF	50V	FILM
C321	QFV81HJ-473	0.047UF	50V	FILM
C322	QFV81HJ-473	0.047UF	50V	FILM
C323	QFV81HJ-273	0.027UF	50V	FILM
C324	QFV81HJ-183	0.018UF	50V	FILM
C325	QFV81HJ-103	0.01UF	50V	FILM
C326	QFV81HJ-562	5600PF	50V	FILM
C327	QFV81HJ-272	2700PF	50V	FILM
C328	QFV81HJ-152	1500PF	50V	FILM
C329	QCS31HJ-681	680PF	50V	CERAMIC
C330	QCS31HJ-331	330PF	50V	CERAMIC
C331	QFM31HK-222	2200PF	50V	MYLAR
C332	QFM31HK-222	2200PF	50V	MYLAR
C333	QFM31HK-152	1500PF	50V	MYLAR
C334	QFM31HK-102	1000PF	50V	MYLAR
C335	QCS31HJ-181	180PF	50V	CERAMIC
C336	QCS31HJ-181	180PF	50V	CERAMIC
C337	QCS31HJ-101	100PF	50V	CERAMIC
C338	QCS31HJ-390	39PF	50V	CERAMIC
C339	QCS31HJ-390	39PF	50V	CERAMIC
C340	QFV81HJ-153	0.015UF	50V	FILM
C341	QET61EM-106	10UF	25V	ELECTRO
C342	QET61EM-106	10UF	25V	ELECTRO

Resistors

ITEM	PART NUMBER	DESCRIPTION		
R301	QVZ5602-001	100K		VARIABLE
R302	QVZ5602-001	100K		VARIABLE
R303	QVZ5602-001	100K		VARIABLE
R304	QVZ5602-001	100K		VARIABLE
R305	QVZ5602-001	100K		VARIABLE
R306	QVZ5602-001	100K		VARIABLE
R307	QVZ5602-001	100K		VARIABLE
R308	QVZ5602-001	100K		VARIABLE
R309	QVZ5602-001	100K		VARIABLE
R310	QVZ5602-001	100K		VARIABLE
R311	QVZ5602-001	100K		VARIABLE
R312	QVZ5602-001	100K		VARIABLE
R313	QRD141J-820S	82	1/4W	CARBON
R314	QRD141J-820S	82	1/4W	CARBON
R315	QRD141J-560S	56	1/4W	CARBON
R316	QRD141J-101S	100	1/4W	CARBON
R317	QRD141J-101S	100	1/4W	CARBON
R318	QRD141J-101S	100	1/4W	CARBON
R319	QRD141J-101S	100	1/4W	CARBON
R320	QRD141J-101S	100	1/4W	CARBON

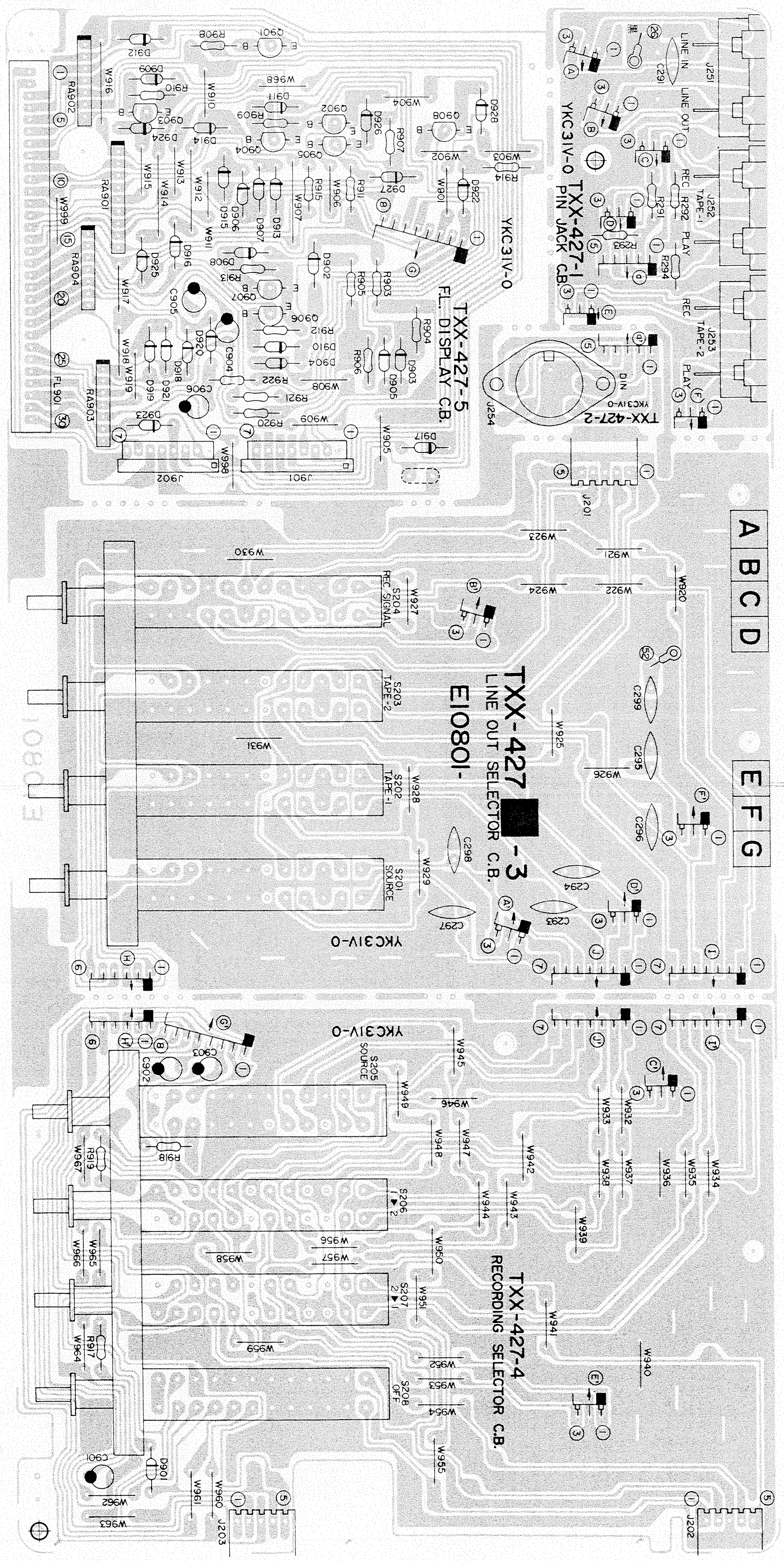
Resistors

ITEM	PART NUMBER	DESCRIPTION		
R321	QRD141J-101S	100	1/4W	CARBON
R322	QRD141J-820S	82	1/4W	CARBON
R323	QRD141J-820S	82	1/4W	CARBON
R324	QRD141J-680S	68	1/4W	CARBON
R325	QRD141J-471S	470	1/4W	CARBON
R326	QRD141J-471S	470	1/4W	CARBON
R327	QRD141J-471S	470	1/4W	CARBON
R328	QRD141J-471S	470	1/4W	CARBON
R329	QRD141J-471S	470	1/4W	CARBON
R330	QRD141J-471S	470	1/4W	CARBON
R331	QRD141J-471S	470	1/4W	CARBON
R332	QRD141J-471S	470	1/4W	CARBON
R333	QRD141J-471S	470	1/4W	CARBON
R334	QRD141J-471S	470	1/4W	CARBON
R335	QRD141J-471S	470	1/4W	CARBON
R336	QRD141J-471S	470	1/4W	CARBON
R337	QRD141J-564S	560K	1/4W	CARBON
R338	QRD141J-124S	120K	1/4W	CARBON
R339	QRD141J-124S	120K	1/4W	CARBON
R340	QRD141J-124S	120K	1/4W	CARBON
R341	QRD141J-472S	4.7K	1/4W	CARBON
R342	QRD141J-563S	56K	1/4W	CARBON
R343	QRD141J-472S	4.7K	1/4W	CARBON
R344	QRD141J-333S	33K	1/4W	CARBON
R345	QRD141J-183S	18K	1/4W	CARBON
R346	QRD141J-472S	4.7K	1/4W	CARBON
R347	QRD141J-103S	10K	1/4W	CARBON
R348	QRD141J-333S	33K	1/4W	CARBON
R349	QRD141J-472S	4.7K	1/4W	CARBON
R350	QRD141J-333S	33K	1/4W	CARBON
R351	QRD141J-472S	4.7K	1/4W	CARBON
R352	QRD141J-333S	33K	1/4W	CARBON
R353	QRD141J-472S	4.7K	1/4W	CARBON
R354	QRD141J-333S	33K	1/4W	CARBON
R355	QRD141J-332S	3.3K	1/4W	CARBON
R356	QRD141J-333S	33K	1/4W	CARBON
R357	QRD141J-332S	3.3K	1/4W	CARBON
R358	QRD141J-333S	33K	1/4W	CARBON
R359	QRD141J-332S	3.3K	1/4W	CARBON
R360	QRD141J-183S	18K	1/4W	CARBON
R361	QRD141J-183S	18K	1/4W	CARBON

Others

ITEM	PART NUMBER	DESCRIPTION
P301	QMV5005-005	5P PLUG ASS'Y
	E10800-101	CIRCUIT BOARD
	E302534-001	SLIDE BRACKET
	E300796-001	FASTENER
	E70053-001	SCREW

10-(2) TXX-427A switch FL P.C. board ass'y


TXX-427-5
FL. DISPLAY C.B.
YKC31V-0
TXX-427-1
PIN JACK C.B.
TXX-427-2
J251
LINE IN
LINE OUT
J252
TAPE-1
REC
PLAY
J253
TAPE-2
REC
PLAY
J254
DIN
J201
J901
J902
FL901
RA901
RA902
RA903
RA904
A
B
C
D
E
F
G
TXX-427 -3
LINE OUT SELECTOR C.B.
E10801-
S204
REC SIGNAL
S203
TAPE-2
S202
TAPE-1
S201
SOURCE
S205
SOURCE
S206
1▶2
S207
2▶1
S208
OFF
TXX-427-4
RECORDING SELECTOR C.B.
J202
J203

Transistors

ITEM	PART NUMBER	DESCRIPTION	
			MAKER
Q901	2SA1015(Y,GR)	SILICON	TOSHIBA
Q902	2SA1015(Y,GR)	SILICON	TOSHIBA
Q903	2SA1015(Y,GR)	SILICON	TOSHIBA
Q904	2SA1015(Y,GR)	SILICON	TOSHIBA
Q905	2SA1015(Y,GR)	SILICON	TOSHIBA
Q906	2SA1015(Y,GR)	SILICON	TOSHIBA
Q907	2SA1015(Y,GR)	SILICON	TOSHIBA
Q908	2SA1015(Y,GR)	SILICON	TOSHIBA

Diodes

ITEM	PART NUMBER	DESCRIPTION	
			MAKER
D901	1S2473	SILICON	ROHM
D902	1S2473	SILICON	ROHM
D903	1S2473	SILICON	ROHM
D904	1S2473	SILICON	ROHM
D905	1S2473	SILICON	ROHM
D906	1S2473	SILICON	ROHM
D907	1S2473	SILICON	ROHM
D908	1S2473	SILICON	ROHM
D909	1S2473	SILICON	ROHM
D910	1S2473	SILICON	ROHM
D911	1S2473	SILICON	ROHM
D912	1S2473	SILICON	ROHM
D913	1S2473	SILICON	ROHM
D914	1S2473	SILICON	ROHM
D915	1S2473	SILICON	ROHM
D916	1S2473	SILICON	ROHM
D917	1S2473	SILICON	ROHM
D918	1S2473	SILICON	ROHM
D919	1S2473	SILICON	ROHM
D920	1S2473	SILICON	ROHM
D921	1S2473	SILICON	ROHM
D922	1S2473	SILICON	ROHM
D923	1S2473	SILICON	ROHM
D924	1S2473	SILICON	ROHM
D925	1S2473	SILICON	ROHM
D926	1S2473	SILICON	ROHM
D927	1S2473	SILICON	ROHM
D928	1S2473	SILICON	ROHM

Capacitors

ITEM	PART NUMBER	DESCRIPTION		
C291	See below	0.01UF	50V	CERAMIC
C293	QCS21HJ-101	100PF	50V	CERAMIC
C294	QCS21HJ-101	100PF	50V	CERAMIC
C295	QCS21HJ-101	100PF	50V	CERAMIC
C296	QCS21HJ-101	100PF	50V	CERAMIC
C297	QCS21HJ-101	100PF	50V	CERAMIC
C298	QCS21HJ-101	100PF	50V	CERAMIC
C901	QET51HM-105	1UF	50V	ELECTRO
C902	QET51HM-105	1UF	50V	ELECTRO
C903	QET51HM-105	1UF	50V	ELECTRO
C904	QET51HM-105	1UF	50V	ELECTRO
C905	QET51HM-105	1UF	50V	ELECTRO
C906	QET51HM-105	1UF	50V	ELECTRO
C299	See below	0.01μF	50V	CERAMIC

Resistors

ITEM	PART NUMBER	DESCRIPTION		
R291	(see below)	330K	1/4W	CARBON
R292	(")	330K	1/4W	CARBON
R293	QRD141J-104S	100K	1/4W	CARBON
R293	QRD141J-104S	100K	1/4W	CARBON
R294	QRD141J-104S	100K	1/4W	CARBON
R294	QRD141J-104S	100K	1/4W	CARBON
R903	QRD141J-223S	22K	1/4W	CARBON
R904	QRD141J-223S	22K	1/4W	CARBON
R905	QRD141J-223S	22K	1/4W	CARBON
R906	QRD141J-223S	22K	1/4W	CARBON
R907	QRD141J-223S	22K	1/4W	CARBON
R908	QRD141J-104S	100K	1/4W	CARBON
R909	QRD141J-473S	47K	1/4W	CARBON
R910	QRD141J-223S	22K	1/4W	CARBON
R911	QRD141J-223S	22K	1/4W	CARBON
R912	QRD141J-473S	47K	1/4W	CARBON
R913	QRD141J-473S	47K	1/4W	CARBON
R914	QRD141J-223S	22K	1/4W	CARBON
R915	QRD141J-223S	22K	1/4W	CARBON
R917	QRZ0052-220	22	1/4W	FUSIBLE
R918	QRZ0052-220	22	1/4W	FUSIBLE
R919	QRZ0052-220	22	1/4W	FUSIBLE
R920	QRD149J-220S	22	1/4W	UNF CARBON ⚠
R921	QRD149J-220S	22	1/4W	UNF CARBON ⚠
R922	QRD149J-220S	22	1/4W	UNF CARBON ⚠
RA901	ERGS8XK-104		RESISTOR ARRAY	
RA902	ERGS6XK-104		RESISTOR ARRAY	
RA903	ERGS6XK-104		RESISTOR ARRAY	
RA904	ERGS6XK-104		RESISTOR ARRAY	

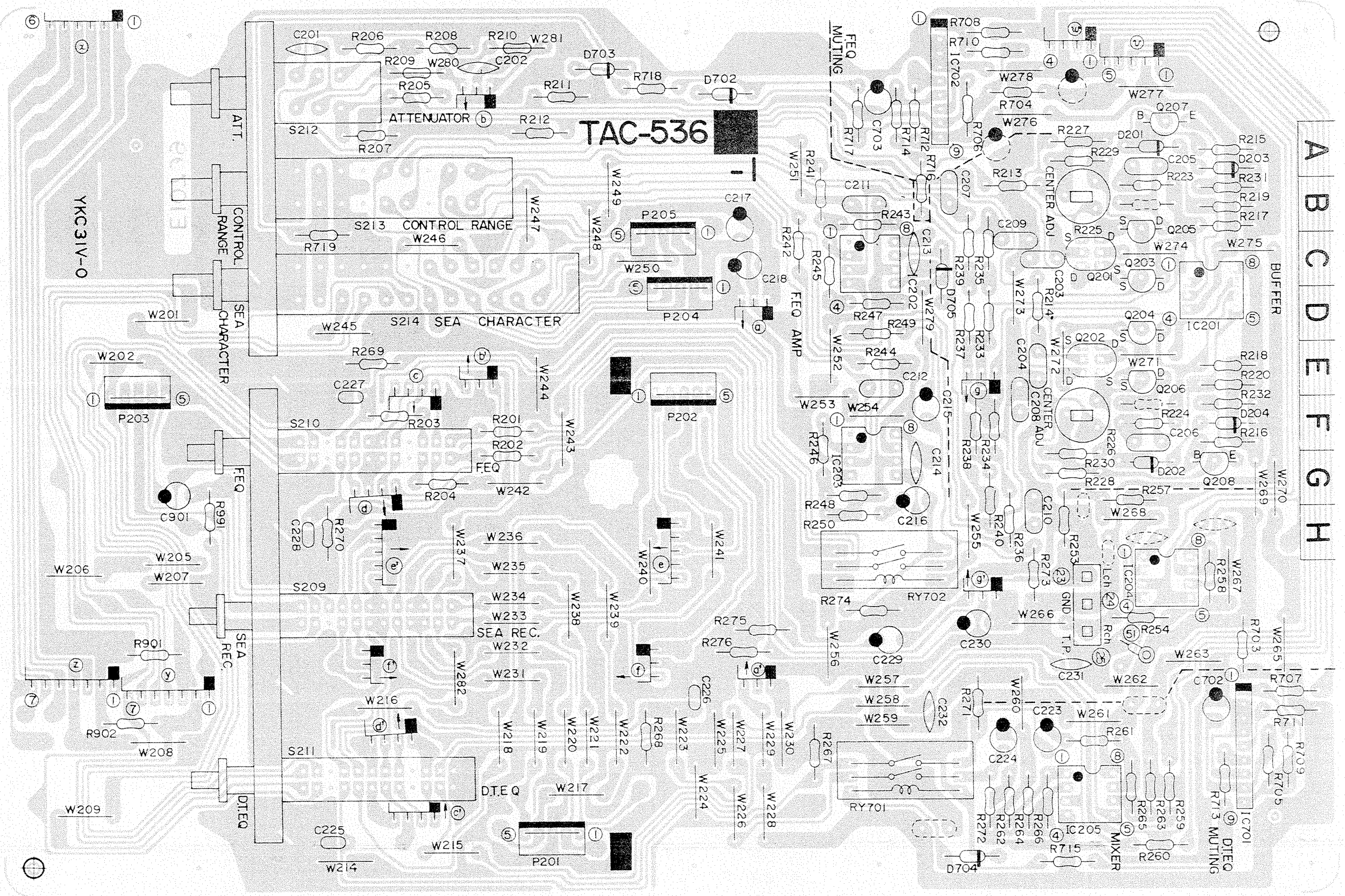
Others

ITEM	PART NUMBER	DESCRIPTION
	EWT011-045	TERMINAL WIRE ASS'Y
	E10801-102	CIRCUIT BOARD
	E302536-001	FL.BRACKET
	SBSB3008M	SCREW
	E70122-001	SPACER
J201	E04370-005B	5P SOCKET ASS'Y
J202	E04370-005B	5P SOCKET ASS'Y
J203	E04370-005B	5P SOCKET ASS'Y
J251	EMN00TV-402A	PIN JACK ASS'Y
J252	EMN00TV-402A	PIN JACK ASS'Y
J253	EMN00TV-402A	PIN JACK ASS'Y
J254	E03623-003	DIN SOCKET (see below)
J901	E04365-007	F.W.SOCKET
J902	E04365-007	F.W.SOCKET
S201	QST4461-E03	PUSH SWITCH
S205	QST4461-E03	PUSH SWITCH
FL901	ELU0001-015	FL TUBE

Specified Numbers in TXX-427 for Designated Areas

Item No.	Description	U.S.A. & Canada	U.S. Military Market & Other Countries	Europe & Australia	West Germany	U.K.
R201, 292	Resistor	—	QRD141J-334S	QRD141J-334S	QRD141J-334S	QRD141J-334S
R293, 294	Resistor	—	QRD141J-104S	QRD141J-104S	QRD141J-104S	QRD141J-104S
J254	DIN Socket	—	E03623-003	E03623-003	E03623-003	E03623-003
C291 —	Capacitor	QCF21HP-103	QCF21HP-103	QCF21HP-103	—	QCF21HP-103
C299 —	Capacitor	—	—	—	QCF21HP-103	—

10-(3) TAC-536A F. EQ amplifier P.C. board ass'y


TAC-536
YKC31V-0
ATT.
CONTROL RANGE
SEA CHARACTER
FEQ
SEA REC.
DT.EQ
ATTENUATOR
S212
S213 CONTROL RANGE
S214 SEA CHARACTER
S210
S209
S211
P201
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P205
C201
C202
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FEQ AMP
C217
C218
C226
R275
R276
R274
RY701
RY702
IC201
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IC702
R708
R710
R704
R706
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R714
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R713 MUTING
R715
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MIXER
BUFFER
CENTER ADJ.
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W276
W277
W278
W279
Lch
Rch
GND
T.P
A
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ICs

ITEM	PART NUMBER	DESCRIPTION	
			MAKER
IC201	NJM4560D-X		JRC
IC202	NJM5534D-D		JRC
IC203	NJM5534D-D		JRC
IC204	NJM4560D-X		JRC
IC205	NJM4560D-X		JRC
IC701	TA7317P		TOSHIBA
IC702	TA7317P		TOSHIBA

Transistors

ITEM	PART NUMBER	DESCRIPTION	
			MAKER
Q201	2SK240(GR)	F.E.T.	TOSHIBA
Q202	2SK240(GR)	F.E.T.	TOSHIBA
Q203	2SK246(GR)	F.E.T.	TOSHIBA
Q204	2SK246(GR)	F.E.T.	TOSHIBA
Q205	2SK246(GR)	F.E.T.	TOSHIBA
Q206	2SK246(GR)	F.E.T.	TOSHIBA
Q207	2SC2240(GR,BL)	SILICON	TOSHIBA
Q208	2SC2240(GR,BL)	SILICON	TOSHIBA

Diodes

ITEM	PART NUMBER	DESCRIPTION	
			MAKER
D201	1S2473	SILICON	ROHM
D202	1S2473	SILICON	ROHM
D203	1S2473	SILICON	ROHM
D204	1S2473	SILICON	ROHM
D702	1S2473	SILICON	ROHM
D703	1S2473	SILICON	ROHM
D704	1S2473	SILICON	ROHM
D705	1S2473	SILICON	ROHM

Capacitors

ITEM	PART NUMBER	DESCRIPTION		
C201	(see page 17)	470P	50V	CERAMIC
C202	(")	470P	50V	CERAMIC
C203	QFP31HJ-101	100PF	50V	POLY
C204	QFP31HJ-101	100PF	50V	POLY
C205	QFM31HK-392	3900PF	50V	MYLAR
C206	QFM31HK-392	3900PF	50V	MYLAR
C207	QFP31HJ-821	820PF	50V	POLY
C208	QFP31HJ-821	820PF	50V	POLY
C209	QFP31HJ-181	180PF	50V	POLY
C210	QFP31HJ-181	180PF	50V	POLY
C211	QFP31HJ-271	270PF	50V	POLY
C212	QFP31HJ-271	270PF	50V	POLY
C213	QCS31HJ-180	18PF	50V	CERAMIC
C214	QCS21HJ-180	18PF	50V	CERAMIC
C215	QET61EM-106	10UF	25V	ELECTRO
C216	QET61EM-106	10UF	25V	ELECTRO
C217	QET51EM-106	10UF	25V	ELECTRO
C218	QET61EM-106	10UF	25V	ELECTRO
C223	QET61EM-106	10UF	25V	ELECTRO
C224	QET61EM-106	10UF	25V	ELECTRO
C225	QFM31HK-102	1000PF	50V	MYLAR
C226	QFM31HK-102	1000PF	50V	MYLAR
C227	QFM31HK-102	1000PF	50V	MYLAR
C228	QFM31HK-102	1000PF	50V	MYLAR
C229	QET61EM-106	10UF	25V	ELECTRO
C230	QET61EM-106	10UF	25V	ELECTRO
C702	QET61CM-226	22UF	16V	ELECTRO
C703	QET61CM-226	22UF	16V	ELECTRO
C901	QET51HM-105	1UF	50V	ELECTRO
C231	See page 17	100PF	50V	CERAMIC
C232	See page 17	100PF	50V	CERAMIC

Resistors

ITEM	PART NUMBER	DESCRIPTION		
R201	QRD141J-103S	10K	1/4W	CARBON
R202	QRD141J-103S	10K	1/4W	CARBON
R203	QRD141J-103S	10K	1/4W	CARBON
R204	QRD141J-103S	10K	1/4W	CARBON
R205	QRD141J-683S	68K	1/4W	CARBON
R206	QRD141J-683S	68K	1/4W	CARBON
R207	QRD141J-105S	1M	1/4W	CARBON
R208	QRD141J-105S	1M	1/4W	CARBON
R209	(see below)	1K	1/4W	CARBON
R210	(")	1K	1/4W	CARBON
R211	QRD141J-683S	68K	1/4W	CARBON
R212	QRD141J-683S	68K	1/4W	CARBON
R213	QRD148J-100S	10	1/4W	CARBON
R214	QRD148J-100S	10	1/4W	CARBON
R215	QRD141J-333S	33K	1/4W	CARBON
R216	QRD141J-333S	33K	1/4W	CARBON
R217	QRD141J-472S	4.7K	1/4W	CARBON
R218	QRD141J-472S	4.7K	1/4W	CARBON
R219	QRD141J-472S	4.7K	1/4W	CARBON
R220	QRD141J-472S	4.7K	1/4W	CARBON
R221	QRD141J-562S	5.6K	1/4W	CARBON
R222	QRD141J-562S	5.6K	1/4W	CARBON
R223	QRD141J-221S	220	1/4W	CARBON
R224	QRD141J-221S	220	1/4W	CARBON
R225	QVP4A0B-101	100	0.1W	VARIABLE
R226	QVP4A0B-101	100	0.1W	VARIABLE
R227	QRD141J-271S	270	1/4W	CARBON
R228	QRD141J-271S	270	1/4W	CARBON
R229	QRD141J-271S	270	1/4W	CARBON
R230	QRD141J-271S	270	1/4W	CARBON
R231	QRD141J-561S	560	1/4W	CARBON
R232	QRD141J-561S	560	1/4W	CARBON
R233	QRD141J-391S	390	1/4W	CARBON
R234	QRD141J-391S	390	1/4W	CARBON
R235	QRD141J-272S	2.7K	1/4W	CARBON
R236	QRD141J-272S	2.7K	1/4W	CARBON
R237	QRD141J-390S	39	1/4W	CARBON
R238	QRD141J-390S	39	1/4W	CARBON
R239	QRD141J-821S	820	1/4W	CARBON
R240	QRD141J-821S	820	1/4W	CARBON
R241	QRD141J-390S	39	1/4W	CARBON
R242	QRD141J-390S	39	1/4W	CARBON
R243	QRD141J-821S	820	1/4W	CARBON
R244	QRD141J-821S	820	1/4W	CARBON
R245	QRD141J-391S	390	1/4W	CARBON
R246	QRD141J-391S	390	1/4W	CARBON
R247	QRD141J-272S	2.7K	1/4W	CARBON
R248	QRD141J-272S	2.7K	1/4W	CARBON
R249	QRD141J-101S	100	1/4W	CARBON
R250	QRD141J-101S	100	1/4W	CARBON
R253	QRD141J-103S	10K	1/4W	CARBON
R254	QRD141J-103S	10K	1/4W	CARBON
R257	QRD141J-103S	10K	1/4W	CARBON
R258	QRD141J-103S	10K	1/4W	CARBON
R259	QRD141J-103S	10K	1/4W	CARBON
R260	QRD141J-103S	10K	1/4W	CARBON
R261	QRD141J-101S	100	1/4W	CARBON
R262	QRD141J-101S	100	1/4W	CARBON
R263	QRD141J-103S	10K	1/4W	CARBON

Resistors

ITEM	PART NUMBER	DESCRIPTION		
R264	QRD141J-103S	10K	1/4W	CARBON
R265	QRD141J-103S	10K	1/4W	CARBON
R266	QRD141J-103S	10K	1/4W	CARBON
R267	QRD141J-223S	22K	1/4W	CARBON
R268	QRD141J-223S	22K	1/4W	CARBON
R269	QRD141J-223S	22K	1/4W	CARBON
R270	QRD141J-223S	22K	1/4W	CARBON
R271	QRD141J-223S	22K	1/4W	CARBON
R272	QRD141J-223S	22K	1/4W	CARBON
R273	QRD141J-223S	22K	1/4W	CARBON
R274	QRD141J-223S	22K	1/4W	CARBON
R275	QRD141J-105S	1M	1/4W	CARBON
R276	QRD141J-105S	1M	1/4W	CARBON
R703	QRD141J-682S	6.8K	1/4W	CARBON
R704	QRD141J-682S	6.8K	1/4W	CARBON
R705	QRD141J-224S	220K	1/4W	CARBON
R706	QRD141J-104S	100K	1/4W	CARBON
R707	QRD141J-124S	120K	1/4W	CARBON
R708	QRD141J-124S	120K	1/4W	CARBON
R709	QRD141J-683S	68K	1/4W	CARBON
R710	QRD141J-683S	68K	1/4W	CARBON
R711	QRD141J-472S	4.7K	1/4W	CARBON
R712	QRD141J-472S	4.7K	1/4W	CARBON
R713	QRD141J-271S	270	1/4W	CARBON
R714	QRD141J-271S	270	1/4W	CARBON
R715	QRD141J-271S	270	1/4W	CARBON
R716	QRD141J-271S	270	1/4W	CARBON
R717	QRD141J-472S	4.7K	1/4W	CARBON
R718	QRD141J-390S	39	1/4W	CARBON
R719	QRD141J-332S	3.3K	1/4W	CARBON
R901	QRD141J-223S	22K	1/4W	CARBON
R902	QRD141J-223S	22K	1/4W	CARBON
R991	QRD149J-220S	22	1/4W	UNF CARBON △

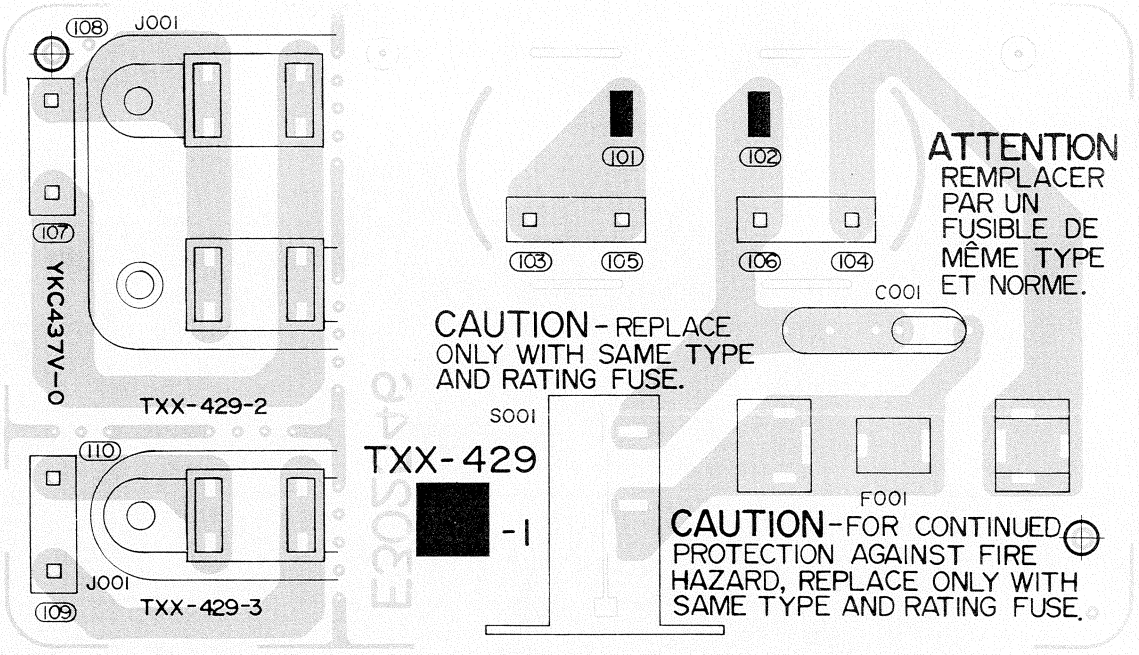
Others

ITEM	PART NUMBER	DESCRIPTION
	E03891-001	TAB
	E67764-003	TERMINAL
	E10799-102	CIRCUIT BOARD
	E302533-001	SWITCH BRACKET
	E65119-001	SPECIAL SCREW
P201	E04372-005A	5P PLUG ASS'Y
P202	E04372-005A	5P PLUG ASS'Y
P203	E04372-005A	5P PLUG ASS'Y
P204	QMV5005-005	5P PLUG AS'Y
P205	QMV5005-005	5P PLUG AS'Y
S209	QST53A1-E01	PUSH SWITCH
S212	QST4351-E01	PUSH SWITCH
RY701	ESK2D12-212	RELAY
RY702	ESK2D12-212	RELAY

Specified Numbers TAC-536 for Designated Areas

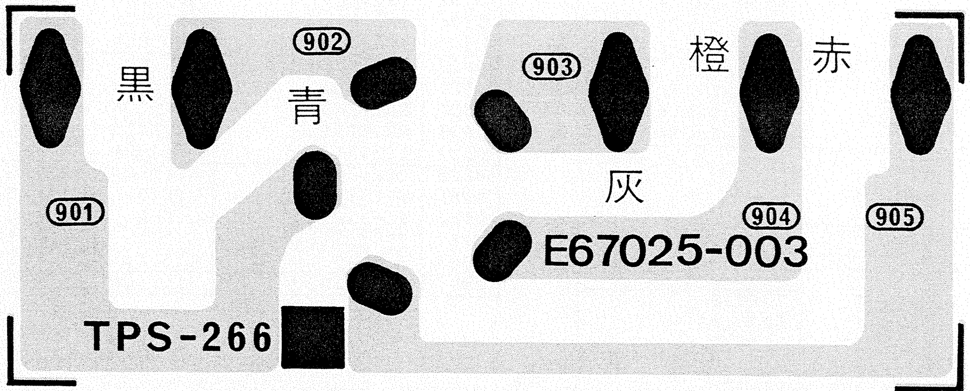
Item No.	Description	U.S.A. & Canada	U.S. Military Market & Other Countries	Europe & Australia	West Germany	U.K.
C201, 202	Capacitor	—	—	—	QCS31HJ-471	—
R209, 210	Resistor	—	—	—	QRD141J-102S	—
C231, 232	Capacitor	—	—	—	QCS31HJ-101	—

10-(4) TXX-429A power supply primary P.C. board ass'y


108
J001
107
YKC437V-0
TXX-429-2
110
J001
109
TXX-429-3
101
102
103
105
106
104
C001
ATTENTION
REMPLACER PAR UN FUSIBLE DE MÊME TYPE ET NORME.
CAUTION - REPLACE ONLY WITH SAME TYPE AND RATING FUSE.
S001
TXX-429
-1
E30546
F001
CAUTION-FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATING FUSE.

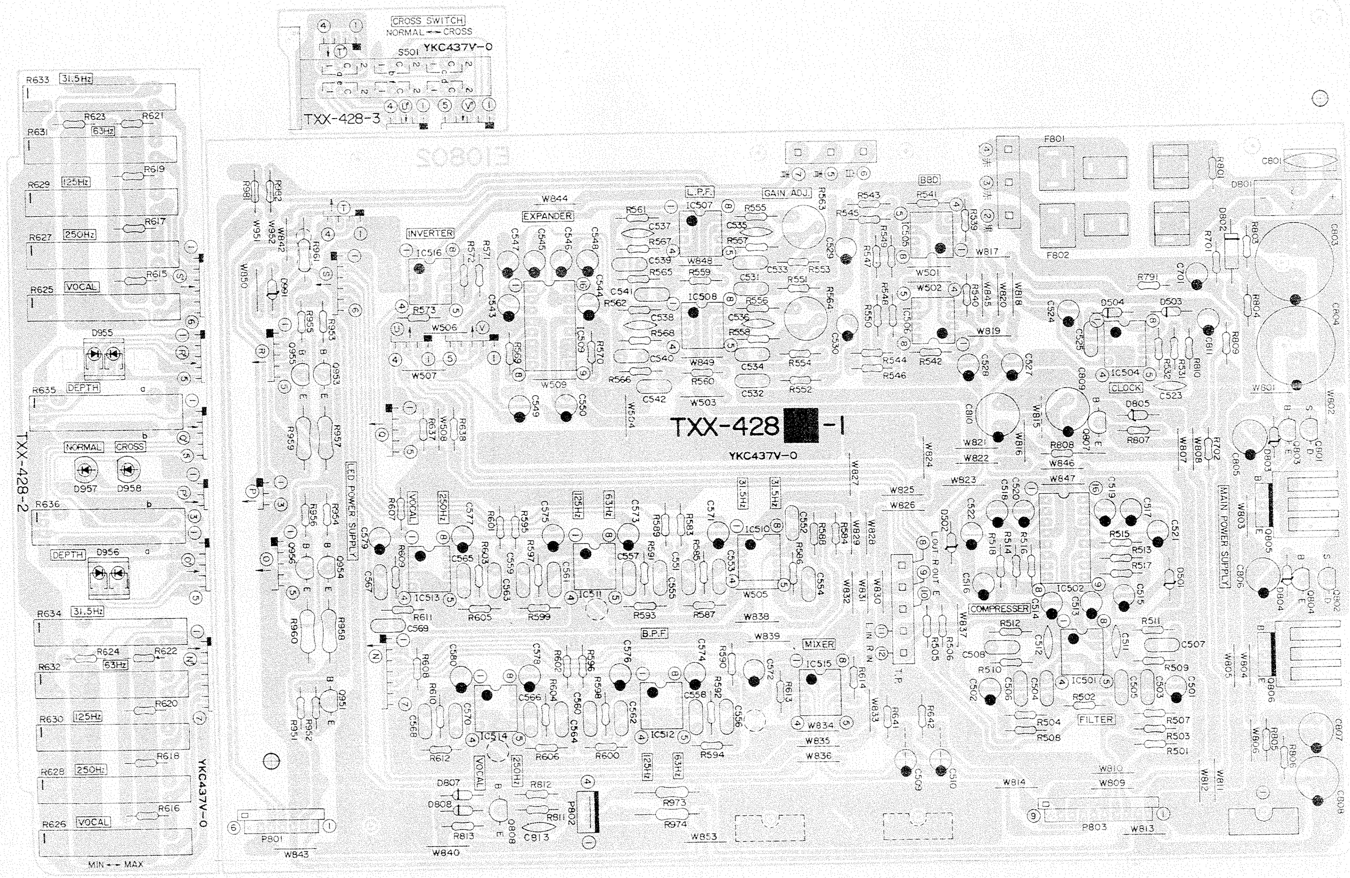
ITEM	PART NUMBER	DESCRIPTION	
	QSP1110-305	PUSH SWITCH	⚠
	QSP1110-305BS	PUSH SWITCH (FOR U.K.)	⚠
	QSP1110-308	PUSH SWITCH (FOR U.S.A. & Canada)	⚠
	E45524-002	FUSE CLIP (〃)	
	E67764-202	WRAPPING TERMINAL	
	E67764-302	WRAPPING TERMINAL	
	E65508-002	TAB	
	EMG7331-001	FUSE CLIP	
	E302546-003	CIRCUIT BOARD	
	E302546-003BS	CIRCUIT BOARD (FOR U.K.)	
	E61380-001	FUSE LABEL (For U.S.A. & Canada)	
	E69916-001	SWITCH BRACKET	
	E65119-001	SPECIAL SCREW	
	E67132-TR315	FUSE LABEL	
J001	QMC0437-002	AC SOCKET (For U.S.A. & Canada)	
C001	QCZ9018-103	CERAMIC (〃)	
C001	QF29016-103BS	MYLAR (FOR U.K.)	

10-(5) TPS-266 power supply P.C. board ass'y


黒
902
青
903
橙
赤
灰
901
904
905
E67025-003
TPS-266

ITEM	PART NUMBER	DESCRIPTION	
	QSR0074-001	ROTARY SWITCH	⚠
	QSR0074-001BS	ROTARY SWITCH (FOR U.K.)	⚠
	E43727-002	TAB	
	E67025-002	CIRCUIT BOARD	
	E67025-002BS	CIRCUIT BOARD (FOR U.K.)	
	E67025-003	CIRCUIT BOARD	
	E67025-003BS	CIRCUIT BOARD (FOR U.K.)	
	E66342-001	V.S.HOLDER	

10-(6) TXX-428 power supply D.T.EQ P.C. board ass'y


CROSS SWITCH
NORMAL ←→ CROSS
S501
YKC437V-0
TXX-428-3
TXX-428-2
TXX-428-1
YKC437V-0
INVERTER
EXPANDER
L.P.F.
GAIN ADJ.
B.P.F.
MIXER
COMPRESSER
FILTER
CLOCK
LED POWER SUPPLY
MAIN POWER SUPPLY
DEPTH
NORMAL
CROSS
VOCAL
31.5Hz
63Hz
125Hz
250Hz
MIN ←→ MAX
P801
P802
P803

ICs

ITEM	PART NUMBER	DESCRIPTION	MAKER
IC501	AN6552		MATSUSHITA
IC502	UPC1571C		NEC
IC504	MN3101		MATSUSHITA
IC505	MN3007		MATSUSHITA
IC507	AN6552		MATSUSHITA
IC509	UPC1571C		NEC
IC510	AN6552		MATSUSHITA
IC515	AN6552		MATSUSHITA
IC516	AN6552		MATSUSHITA

Transistors

ITEM	PART NUMBER	DESCRIPTION	MAKER
Q801	2SK246(Y)	F.E.T.	TOSHIBA
Q802	2SK246(Y)	F.E.T.	TOSHIBA
Q803	2SC1775AV(E,F)	SILICON	HITACHI
Q804	2SA872AV(D,E)	SILICON	HITACHI
Q805	2SD313V(D,E)	SILICON	SANYO
Q806	2SB507V(D,E)	SILICON	SANYO
Q807	2SC2240(GR,BL)	SILICON	TOSHIBA
Q808	2SC2235(O,Y)	SILICON	TOSHIBA
Q951	2SC2235(O,Y)	SILICON	TOSHIBA
Q953	2SA1015(Y,GR)	SILICON	TOSHIBA
Q954	2SA1015(Y,GR)	SILICON	TOSHIBA
Q955	2SC1775AV(F1)	SILICON	HITACHI
Q956	2SC1775AV(F1)	SILICON	HITACHI

Diodes

ITEM	PART NUMBER	DESCRIPTION	MAKER
D501	RD6.8EB3	SILICON	NEC
D502	RD6.8EB3	SILICON	NEC
D503	1S2473	SILICON	ROHM
D504	1S2473	SILICON	ROHM
D801	S1RBA20F1	SILICON	SHINDENGEN
D802	10E2FD-1	SILICON	NIPPON INTER
D803	RD20EB3	SILICON	NEC
D804	RD20EB3	SILICON	NEC
D805	RD15EB3	SILICON	NEC
D807	1S2473	SILICON	ROHM
D808	1S2473	SILICON	ROHM
D955	SLF-5022	L.E.D.	SANYO
D956	SLF-5022	L.E.D.	SANYO
D957	TLG143(E,F)	L.E.D.	TOSHIBA
D958	TLR143	L.E.D.	TOSHIBA
D991	RD3.3EB2	SILICON	NEC

Capacitors

ITEM	PART NUMBER	DESCRIPTION		
C501	QET61HM-475	4.7UF	50V	ELECTRO
C502	QET61HM-475	4.7UF	50V	ELECTRO
C503	QFM31HK-472	4700PF	50V	MYLAR
C504	QFM31HK-472	4700PF	50V	MYLAR
C505	QFM31HK-472	4700PF	50V	MYLAR
C506	QFM31HK-472	4700PF	50V	MYLAR
C507	QFM31HK-472	4700PF	50V	MYLAR
C508	QFM31HK-472	4700PF	50V	MYLAR
C509	QET61HM-475	4.7UF	50V	ELECTRO
C510	QET61HM-475	4.7UF	50V	ELECTRO
C511	QCS31HJ-331	330PF	50V	CERAMIC
C512	QCS31HJ-331	330PF	50V	CERAMIC
C513	QET51HM-475	4.7UF	50V	ELECTRO
C514	QET51HM-475	4.7UF	50V	ELECTRO
C515	QET61EM-106	10UF	25V	ELECTRO
C516	QET61EM-106	10UF	25V	ELECTRO
C517	QET61HM-475	4.7UF	50V	ELECTRO
C518	QET61HM-475	4.7UF	50V	ELECTRO
C519	QET51EM-106	10UF	25V	ELECTRO
C520	QET51EM-106	10UF	25V	ELECTRO
C521	QET61HM-225	2.2UF	50V	ELECTRO
C522	QET61HM-225	2.2UF	50V	ELECTRO
C523	QCS31HJ-221	220PF	50V	CERAMIC
C524	QET61HM-475	4.7UF	50V	ELECTRO
C525	QFM31HK-473	0.047UF	50V	MYLAR
C527	QET61EM-106	10UF	25V	ELECTRO
C528	QET61EM-106	10UF	25V	ELECTRO
C529	QET61HM-475	4.7UF	50V	ELECTRO
C530	QET61HM-475	4.7UF	50V	ELECTRO
C531	QFM31HK-472	4700PF	50V	MYLAR
C532	QFM31HK-472	4700PF	50V	MYLAR
C533	QFM31HK-472	4700PF	50V	MYLAR
C534	QFM31HK-472	4700PF	50V	MYLAR
C535	QCS31HJ-331	330PF	50V	CERAMIC
C536	QCS31HJ-331	330PF	50V	CERAMIC
C537	QCS31HJ-331	330PF	50V	CERAMIC
C538	QCS31HJ-331	330PF	50V	CERAMIC
C539	QFM31HK-472	4700PF	50V	MYLAR
C540	QFM31HK-472	4700PF	50V	MYLAR
C541	QFM31HK-472	4700PF	50V	MYLAR
C542	QFM31HK-472	4700PF	50V	MYLAR
C543	QET61HM-225	2.2UF	50V	ELECTRO
C544	QET61HM-225	2.2UF	50V	ELECTRO
C545	QET51EM-106	10UF	25V	ELECTRO
C546	QET51EM-106	10UF	25V	ELECTRO
C547	QET51HM-475	4.7UF	50V	ELECTRO
C548	QET51HM-475	4.7UF	50V	ELECTRO
C549	QET61EM-106	10UF	25V	ELECTRO
C550	QET61EM-106	10UF	25V	ELECTRO
C551	QFM81HK-823	0.082UF	50V	MYLAR
C552	QFM81HK-823	0.082UF	50V	MYLAR
C553	QFM81HK-823	0.082UF	50V	MYLAR
C554	QFM81HK-823	0.082UF	50V	MYLAR
C555	QFM31HK-473	0.047UF	50V	MYLAR
C556	QFM31HK-473	0.047UF	50V	MYLAR
C557	QFM31HK-473	0.047UF	50V	MYLAR
C558	QFM31HK-473	0.047UF	50V	MYLAR
C559	QFM31HK-223	0.022UF	50V	MYLAR
C560	QFM31HK-223	0.022UF	50V	MYLAR
C561	QFM31HK-223	0.022UF	50V	MYLAR
C562	QFM31HK-223	0.022UF	50V	MYLAR
C563	QFM31HK-103	0.01UF	50V	MYLAR
C564	QFM31HK-103	0.01UF	50V	MYLAR
C565	QFM31HK-103	0.01UF	50V	MYLAR
C566	QFM31HK-103	0.01UF	50V	MYLAR
C567	QFM31HK-182	1800PF	50V	MYLAR
C568	QFM31HK-182	1800PF	50V	MYLAR
C569	QFM31HK-182	1800PF	50V	MYLAR
C570	QFM31HK-182	1800PF	50V	MYLAR
C571	QET61EM-106	10UF	25V	ELECTRO
C572	QET61EM-106	10UF	25V	ELECTRO
C573	QET61EM-106	10UF	25V	ELECTRO
C574	QET61EM-106	10UF	25V	ELECTRO
C575	QET61EM-106	10UF	25V	ELECTRO
C576	QET61EM-106	10UF	25V	ELECTRO
C577	QET61EM-106	10UF	25V	ELECTRO
C578	QET61EM-106	10UF	25V	ELECTRO
C579	QET61EM-106	10UF	25V	ELECTRO
C580	QET61EM-106	10UF	25V	ELECTRO

Capacitors

ITEM	PART NUMBER	DESCRIPTION		
C701	QET61HM-105	1UF	50V	ELECTRO
C801	(see page 21)			
C803	QET51VM-228	2200UF	35V	ELECTRO
C804	QET51VM-228	2200UF	35V	ELECTRO
C805	QET51EM-107	100UF	25V	ELECTRO
C806	QET51EM-107	100UF	25V	ELECTRO
C807	QET61EM-476	47UF	25V	ELECTRO
C808	QET51EM-227	220UF	25V	ELECTRO
C809	QET61CM-107	100UF	16V	ELECTRO
C810	QET61CM-107	100UF	16V	ELECTRO
C811	QET61CM-107	100UF	16V	ELECTRO
C813	QCF31HP-103	0.01UF	50V	CERAMIC

Resistors

ITEM	PART NUMBER	DESCRIPTION		
R501	QRD141J-473S	47K	1/4W	CARBON
R502	QRD141J-473S	47K	1/4W	CARBON
R503	QRD141J-393S	39K	1/4W	CARBON
R504	QRD141J-393S	39K	1/4W	CARBON
R505	QRD141J-473S	47K	1/4W	CARBON
R506	QRD141J-473S	47K	1/4W	CARBON
R507	QRD141J-473S	47K	1/4W	CARBON
R508	QRD141J-473S	47K	1/4W	CARBON
R509	QRD141J-333S	33K	1/4W	CARBON
R510	QRD141J-333S	33K	1/4W	CARBON
R511	QRD141J-823S	82K	1/4W	CARBON
R512	QRD141J-823S	82K	1/4W	CARBON
R513	QRD141J-103S	10K	1/4W	CARBON
R514	QRD141J-103S	10K	1/4W	CARBON
R515	QRD141J-103S	10K	1/4W	CARBON
R516	QRD141J-103S	10K	1/4W	CARBON
R517	QRD141J-331S	330	1/4W	CARBON
R518	QRD141J-331S	330	1/4W	CARBON
R531	QRD141J-823S	82K	1/4W	CARBON
R532	QRD141J-223S	22K	1/4W	CARBON
R539	QRD141J-823S	82K	1/4W	CARBON
R540	QRD141J-823S	82K	1/4W	CARBON
R541	QRD141J-683S	68K	1/4W	CARBON
R542	QRD141J-683S	68K	1/4W	CARBON
R543	QRD141J-562S	5.6K	1/4W	CARBON
R544	QRD141J-562S	5.6K	1/4W	CARBON
R545	QRD141J-562S	5.6K	1/4W	CARBON
R546	QRD141J-562S	5.6K	1/4W	CARBON
R547	QRD141J-104S	100K	1/4W	CARBON
R548	QRD141J-104S	100K	1/4W	CARBON
R549	QRD141J-104S	100K	1/4W	CARBON
R550	QRD141J-104S	100K	1/4W	CARBON
R551	QRD141J-473S	47K	1/4W	CARBON
R552	QRD141J-473S	47K	1/4W	CARBON
R553	QRD141J-393S	39K	1/4W	CARBON
R554	QRD141J-393S	39K	1/4W	CARBON
R555	QRD141J-473S	47K	1/4W	CARBON
R556	QRD141J-473S	47K	1/4W	CARBON
R557	QRD141J-333S	33K	1/4W	CARBON
R558	QRD141J-333S	33K	1/4W	CARBON
R559	QRD141J-393S	39K	1/4W	CARBON
R560	QRD141J-393S	39K	1/4W	CARBON
R561	QRD141J-823S	82K	1/4W	CARBON
R562	QRD141J-823S	82K	1/4W	CARBON
R563	QVP4A0B-104	100K	0.1W	VARIABLE
R564	QVP4A0B-104	100K	0.1W	VARIABLE
R565	QRD141J-393S	39K	1/4W	CARBON
R566	QRD141J-393S	39K	1/4W	CARBON
R567	QRD141J-333S	33K	1/4W	CARBON
R568	QRD141J-333S	33K	1/4W	CARBON
R569	QRD141J-183S	18K	1/4W	CARBON
R570	QRD141J-183S	18K	1/4W	CARBON
R571	QRD141J-103S	10K	1/4W	CARBON
R572	QRD141J-103S	10K	1/4W	CARBON
R573	QRD141J-103S	10K	1/4W	CARBON
R575	QRD141J-103S	10K	1/4W	CARBON
R583	QRD141J-473S	47K	1/4W	CARBON
R584	QRD141J-473S	47K	1/4W	CARBON
R585	QRD141J-474S	470K	1/4W	CARBON

Resistors

ITEM	PART NUMBER	DESCRIPTION			
R586	QRD141J-474S	470K	1/4W	CARBON	
R587	QRD141J-822S	8.2K	1/4W	CARBON	
R588	QRD141J-822S	8.2K	1/4W	CARBON	
R589	QRD141J-473S	47K	1/4W	CARBON	
R590	QRD141J-473S	47K	1/4W	CARBON	
R591	QRD141J-474S	470K	1/4W	CARBON	
R592	QRD141J-474S	470K	1/4W	CARBON	
R593	QRD141J-822S	8.2K	1/4W	CARBON	
R594	QRD141J-822S	8.2K	1/4W	CARBON	
R595	QRD141J-473S	47K	1/4W	CARBON	
R596	QRD141J-473S	47K	1/4W	CARBON	
R597	QRD141J-474S	470K	1/4W	CARBON	
R598	QRD141J-474S	470K	1/4W	CARBON	
R599	QRD141J-822S	8.2K	1/4W	CARBON	
R600	QRD141J-822S	8.2K	1/4W	CARBON	
R601	QRD141J-473S	47K	1/4W	CARBON	
R602	QRD141J-473S	47K	1/4W	CARBON	
R603	QRD141J-474S	470K	1/4W	CARBON	
R604	QRD141J-474S	470K	1/4W	CARBON	
R605	QRD141J-822S	8.2K	1/4W	CARBON	
R606	QRD141J-822S	8.2K	1/4W	CARBON	
R607	QRD141J-473S	47K	1/4W	CARBON	
R608	QRD141J-473S	47K	1/4W	CARBON	
R609	QRD141J-474S	470K	1/4W	CARBON	
R610	QRD141J-474S	470K	1/4W	CARBON	
R611	QRD141J-184S	180K	1/4W	CARBON	
R612	QRD141J-184S	180K	1/4W	CARBON	
R613	QRD141J-682S	6.8K	1/4W	CARBON	
R614	QRD141J-682S	6.8K	1/4W	CARBON	
R615	QRD141J-333S	33K	1/4W	CARBON	
R616	QRD141J-333S	33K	1/4W	CARBON	
R617	QRD141J-333S	33K	1/4W	CARBON	
R618	QRD141J-333S	33K	1/4W	CARBON	
R619	QRD141J-333S	33K	1/4W	CARBON	
R620	QRD141J-333S	33K	1/4W	CARBON	
R621	QRD141J-333S	33K	1/4W	CARBON	
R622	QRD141J-333S	33K	1/4W	CARBON	
R623	QRD141J-333S	33K	1/4W	CARBON	
R624	QRD141J-333S	33K	1/4W	CARBON	
R625	QVZ5302-001	10K		S.VARIABLE	
R626	QVZ5302-001	10K		S.VARIABLE	
R627	QVZ5302-001	10K		S.VARIABLE	
R628	QVZ5302-001	10K		S.VARIABLE	
R629	QVZ5302-001	10K		S.VARIABLE	
R630	QVZ5302-001	10K		S.VARIABLE	
R631	QVZ5302-001	10K		S.VARIABLE	
R632	QVZ5302-001	10K		S.VARIABLE	
R633	QVZ5302-001	10K		S.VARIABLE	
R634	QVZ5302-001	10K		S.VARIABLE	
R635	QVZ5303-001	10K		S.VARIABLE	
R636	QVZ5303-001	10K		S.VARIABLE	
R637	QRD141J-472S	4.7K	1/4W	CARBON	
R638	QRD141J-472S	4.7K	1/4W	CARBON	
R641	QRD141J-223S	22K	1/4W	CARBON	
R642	QRD141J-223S	22K	1/4W	CARBON	
R701	QRD149J-220S	22	1/4W	UNF CARBON	⚠
R702	QRD141J-272S	2.7K	1/4W	CARBON	
R791	QRD141J-473S	47K	1/4W	CARBON	
R801	QRD141J-563S	56K	1/4W	CARBON	

Resistors

ITEM	PART NUMBER	DESCRIPTION			
R803	QRD141J-563S	56K	1/4W	CARBON	
R804	QRD141J-563S	56K	1/4W	CARBON	
R805	QRD141J-563S	56K	1/4W	CARBON	
R806	QRD141J-563S	56K	1/4W	CARBON	
R807	QRD141J-471S	470	1/4W	CARBON	
R808	QRZ0052-101	100	1/4W	FUSIBLE	⚠
R809	QRD141J-681S	680	1/4W	CARBON	
R810	QRD141J-332S	3.3K	1/4W	CARBON	
R811	QRD141J-562S	5.6K	1/4W	CARBON	
R812	QRD141J-272S	2.7K	1/4W	CARBON	
R813	QRZ0051-8R2	8.2	1/4W	FUSIBLE	⚠
R951	QRD141J-103S	10K	1/4W	CARBON	
R952	QRD141J-333S	33K	1/4W	CARBON	
R953	QRD141J-223S	22K	1/4W	CARBON	
R954	QRD141J-223S	22K	1/4W	CARBON	
R955	QRD141J-223S	22K	1/4W	CARBON	
R956	QRD141J-223S	22K	1/4W	CARBON	
R957	QRG017J-821S	820	1W	O.M.FILM	⚠
R958	QRG017J-821S	820	1W	O.M.FILM	⚠
R959	QRG017J-821S	820	1W	O.M.FILM	⚠
R960	QRG017J-821S	820	1W	O.M.FILM	⚠
R961	QRD129J-102	1K	1/2W	UNF CARBON	⚠
R973	QRG017J-221S	220	1W	O.M.FILM	⚠
R974	QRG017J-221S	220	1W	O.M.FILM	⚠
R981	see below	2.2	1/4W	UNF CARBON	⚠

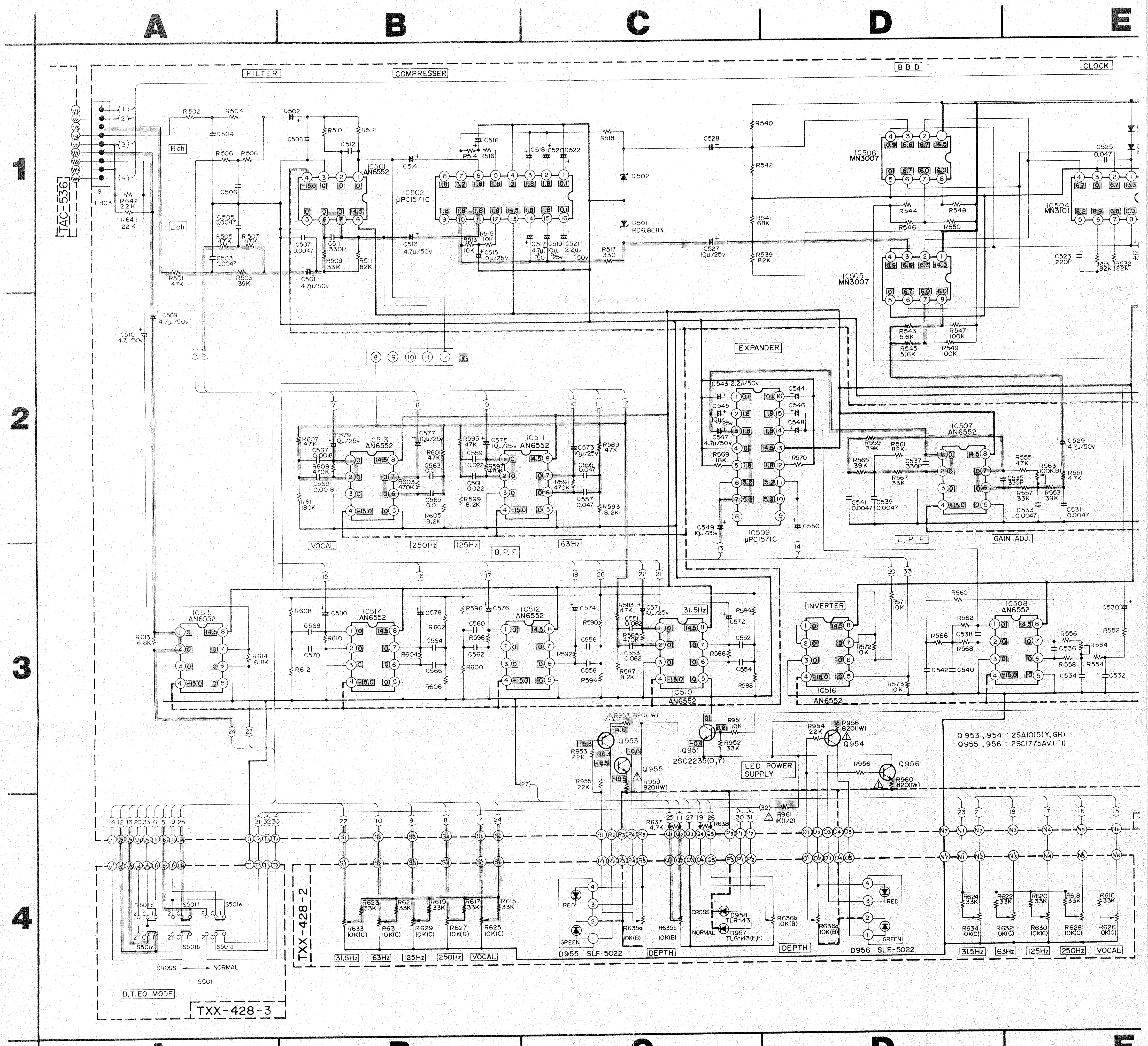
Others

ITEM	PART NUMBER	DESCRIPTION
	E67764-005	5PIN PLUG
	E45524-002	FUSE CLIP (see below)
	E67764-103	WRAPPING TERMINAL
	EMG7331-001	FUSE CLIP (see below)
S501	QST2101-E03	PUSH SWITCH
	E10802-101	CIRCUIT BOARD
	E302535-001	SLIDE BRACKET
	E69919-001	LED HOLDER
	E70053-001	SCREW
	SBSB3008M	SCREW
	E69826-H25	HEAT SINK
	E65396-001	EARTH PLATE
P801	E04365-006	6P CONNECTOR
P802	QMV5005-004	4P PLUG ASS'Y
P803	E04365-009	F.WIRE SOCKET

Specified Numbers in TXX-428 for Designated Areas

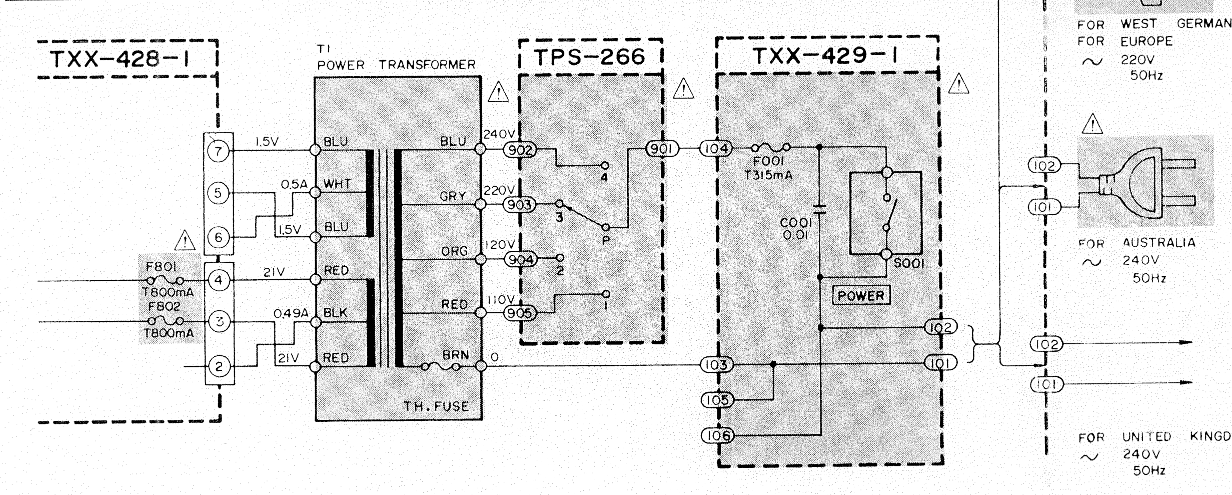
Item No.	Description	U.S.A. & Canada	U.S. Military Market & Other Countries	Europe & Australia	West Germany	U.K.
C801	Capacitor	QCE22HP-103	QFZ0075-104H	QFZ0075-104H	QFZ0075-104H	QFZ0075-104H
R981	Resistor	QRD149J-2R2S	—	—	—	—
—	Fuse Clip	E45524-002	EMG7331-001	EMG7331-001	EMG7331-001	EMG7331-001

11. SEA-R7 Schematic Diagram


A
B
C
D
E
1
2
3
4
TAC-536
P803
FILTER
COMPRESSER
BBD
CLOCK
Rch
Lch
IC501 AN6552
IC502 μPC1571C
IC506 MN3007
IC505 MN3007
IC504 MN3101
D502
D501 RD6.8EB3
EXPANDER
IC509 μPC1571C
IC507 AN6552
L.P.F
GAIN ADJ.
IC513 AN6552
IC511 AN6552
VOCAL
250Hz
125Hz
63Hz
B.P.F
IC515 AN6552
IC514 AN6552
IC512 AN6552
IC510 AN6552
31.5Hz
INVERTER
IC516 AN6552
IC508 AN6552
Q953
Q955
2SC2235(O,Y)
Q951
LED POWER SUPPLY
Q954
Q956
Q 953, 954 : 2SA1015(Y, GR)
Q 955, 956 : 2SC1775AV(F1)
TXX-428-2
TXX-428-3
S501
CROSS
NORMAL
D.T.EQ MODE
D955 SLF-5022
D956 SLF-5022
DEPTH
D958 TLR-143
D957 TLG-143(E,F)
RED
GREEN

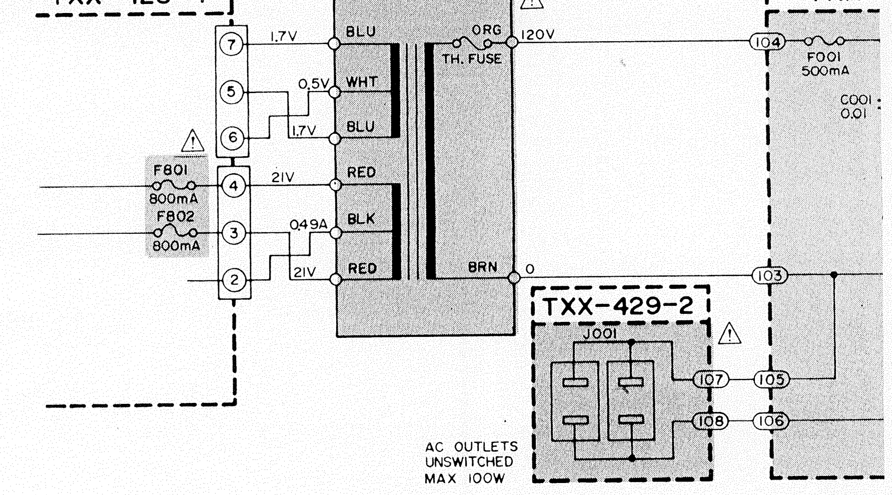
(E),(A),(BS),(G)

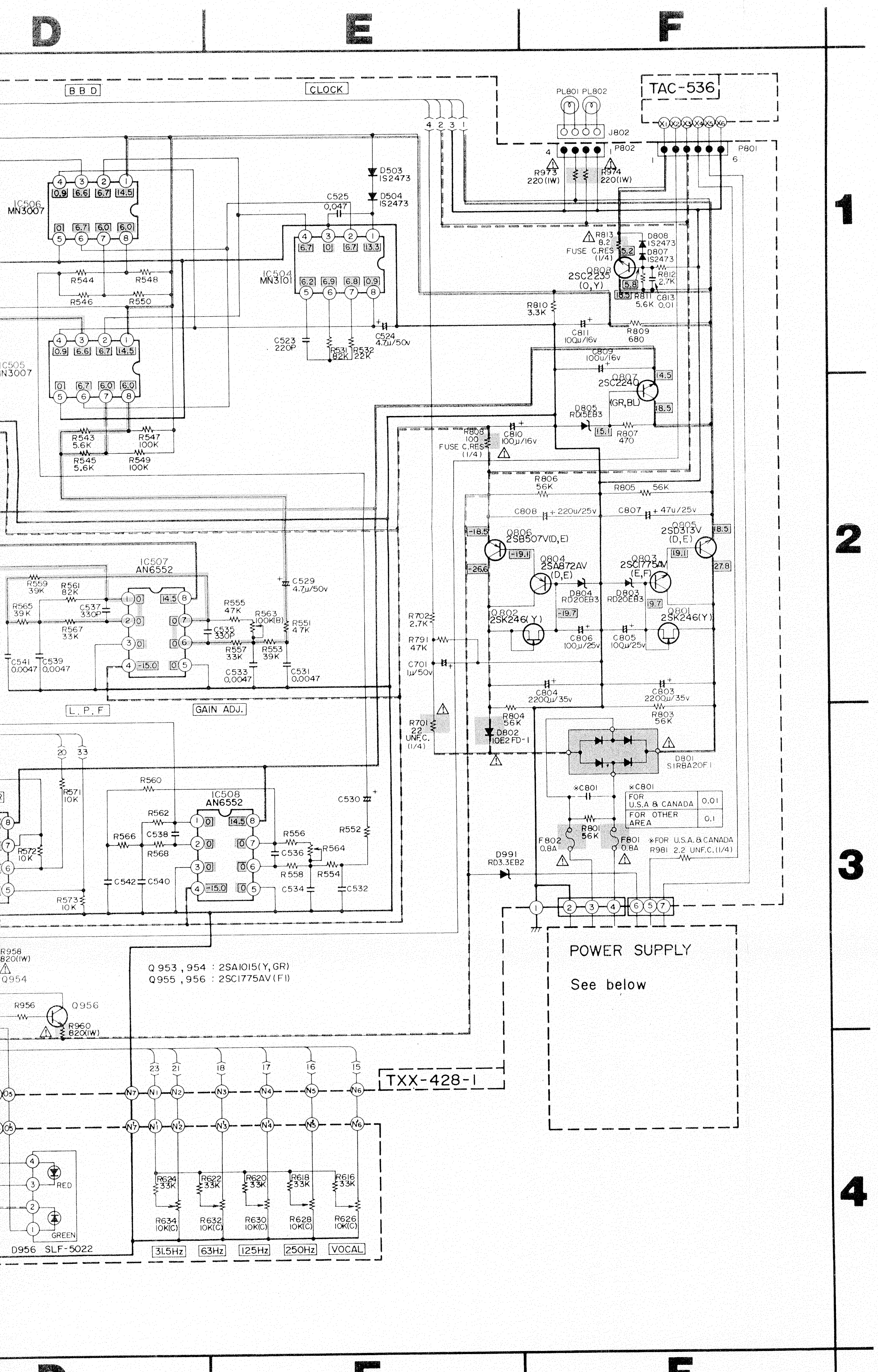
(E) FOR EUROPE	:	~220V, 50Hz
(A) FOR AUSTRALIA	:	~240V, 50Hz
(BS) FOR U.K.	:	~240V, 50Hz
(G) FOR WEST GERMANY	:	~220V, 50Hz


TXX-428-1
T1
POWER TRANSFORMER
TH. FUSE
TPS-266
TXX-429-1
F001 T315mA
C001 0.01
S001
POWER
F801 T800mA
F802 T800mA
FOR WEST GERMANY
FOR EUROPE
~ 220V 50Hz
FOR AUSTRALIA
~ 240V 50Hz
FOR UNITED KINGDOM
~ 240V 50Hz

(J),(C)

(J) FOR U.S.A.	:	AC120V
(C) FOR CANADA	:	AC120V

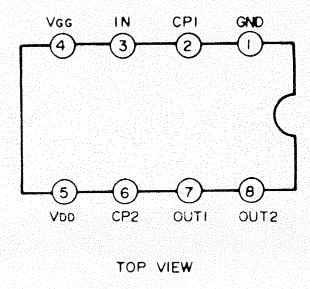

TXX-428-1
T1
POWER TRANSFORMER
TH. FUSE
F801 800mA
F802 800mA
TXX-429-2
J001
AC OUTLETS UNSWITCHED MAX 100W
TXX-
F001 500mA
C001 0.01


D
E
F
1
2
3
4
BBD
CLOCK
IC506 MN3007
IC505 MN3007
IC504 MN3101
IC507 AN6552
IC508 AN6552
L.P.F
GAIN ADJ.
TAC-536
TXX-428-I
POWER SUPPLY
See below
Q 953 , 954 : 2SA1015(Y, GR)
Q955 , 956 : 2SC1775AV(FI)
D956 SLF-5022
31.5Hz
63Hz
125Hz
250Hz
VOCAL
D801 S1RBA20FI
D802 10E2FD-I
D991 RD3.3EB2
2SB507V(D,E)
2SD313V (D,E)
2SA872AV (D,E)
2SC1775AV (E,F)
2SK246(Y)
2SC2240 (GR,BL)
2SC2235 (O,Y)
FUSE C.RES
×FOR U.S.A & CANADA R981 2.2 UNF.C.(1/4)

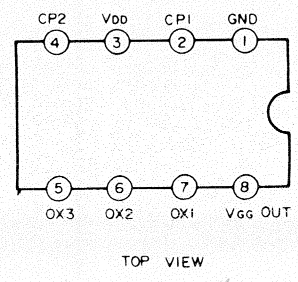
Note

1. ——— indicates positive B (+) power supply.
2. - - - - indicates negative B (-) power supply.
3. ▨ indicates signal path.
4. With no signal input, voltage values measured with a tester (internal impedance 20 kΩ/V) are indicated as follows:
   Example: 15.0 -15
5. When replacing the parts in the darkened area (▨) and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

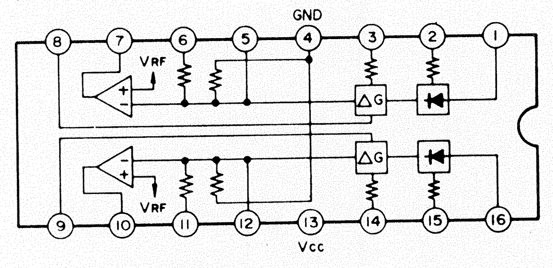
MN3007


VGG
IN
CP1
GND
VDD
CP2
OUT1
OUT2
TOP VIEW

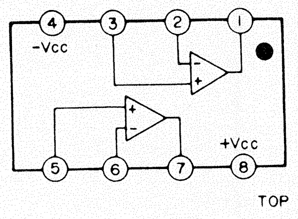
MN3101


CP2
VDD
CP1
GND
OX3
OX2
OX1
VGG OUT
TOP VIEW

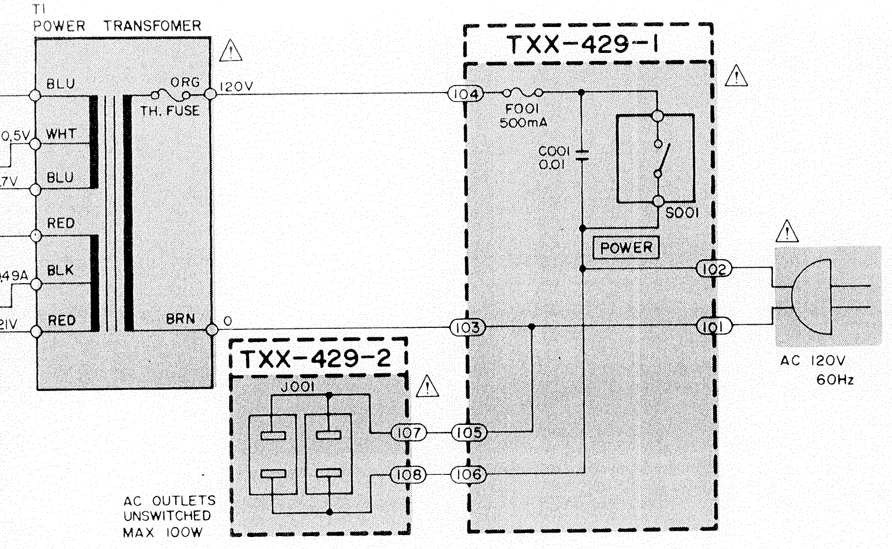
µPC1571C


GND
VRF
ΔG
Vcc

AN6552

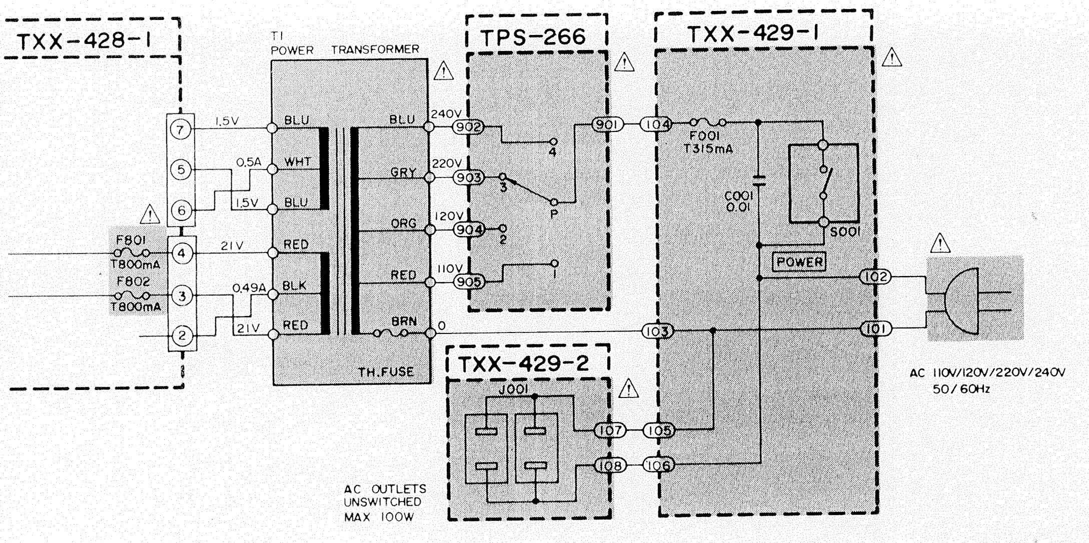

-Vcc
+Vcc
TOP VIEW

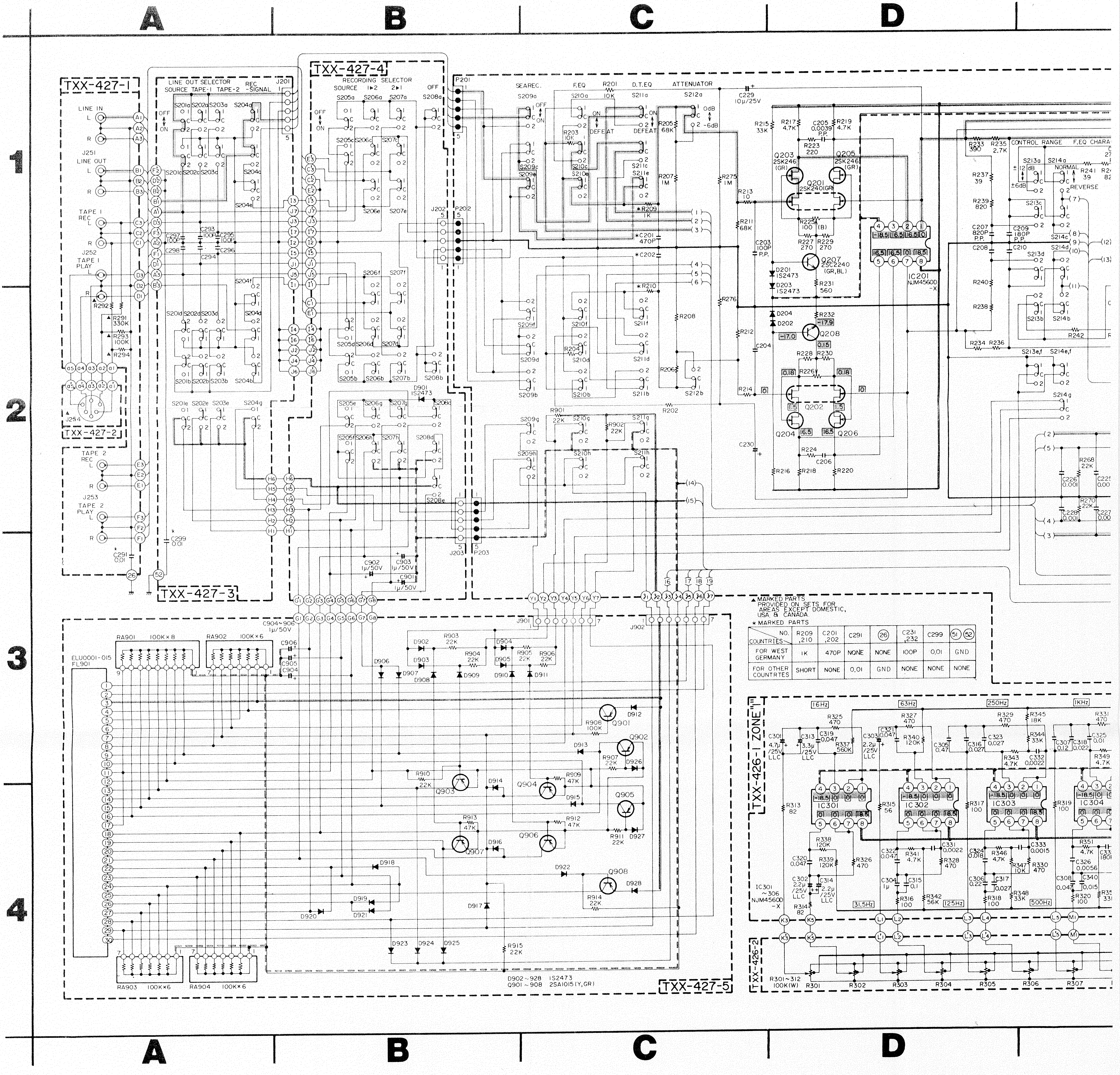
(J) FOR U.S.A. : AC120V 60Hz
(C) FOR CANADA : AC120V 60Hz


T1
POWER TRANSFOMER
BLU
WHT
RED
BLK
ORG
TH. FUSE
BRN
120V
TXX-429-1
F001 500mA
C001 0.01
POWER
S001
TXX-429-2
J001
AC OUTLETS UNSWITCHED MAX 100W
AC 120V 60Hz

(U),(P)

(U) FOR OTHER COUNTRIES
(P) FOR PACEX

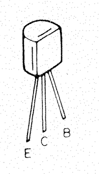

TXX-428-1
F801 T800mA
F802 T800mA
T1
POWER TRANSFORMER
BLU
WHT
RED
BLK
GRY
ORG
BRN
TH.FUSE
240V
220V
120V
110V
TPS-266
TXX-429-1
F001 T315mA
C001 0.01
POWER
S001
TXX-429-2
J001
AC OUTLETS UNSWITCHED MAX 100W
AC 110V/120V/220V/240V 50/60Hz


TXX-427-1
TXX-427-2
TXX-427-3
TXX-427-4
TXX-427-5
TXX-426-1 ZONE"1"
TXX-426-2
LINE IN
J251 LINE OUT
TAPE 1 REC
J252 TAPE 1 PLAY
TAPE 2 REC
J253 TAPE 2 PLAY
J254
LINE OUT SELECTOR SOURCE TAPE-1 TAPE-2
REC -SIGNAL
J201
RECORDING SELECTOR SOURCE 1▶2 2▶1 OFF
SEAREC.
F.EQ
D.T.EQ
DEFEAT
ATTENUATOR
0dB
-6dB
CONTROL RANGE
F.EQ CHARA
NORMAL
REVERSE
IC201 NJM4560D-X
IC301~306 NJM4560D-X
IC301
IC302
IC303
IC304
ELU0001-015 FL901
RA901 100K×8
RA902 100K×6
RA903 100K×6
RA904 100K×6
J901
J902
J202
J203
P201
P202
P203
16Hz
63Hz
250Hz
1KHz
31.5Hz
125Hz
500Hz
R301~312 100K(W)
D902~928 1S2473
Q901~908 2SA1015(Y,GR)
A
B
C
D
1
2
3
4

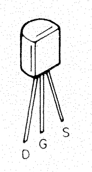
▲MARKED PARTS
PROVIDED ON SETS FOR
AREAS EXCEPT DOMESTIC,
USA & CANADA.

*MARKED PARTS

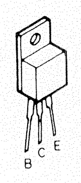
NO. / COUNTRIES	R209 ,210	C201 ,202	C291	(26)	C231 ,232	C299	(51) (52)
FOR WEST GERMANY	1K	470P	NONE	NONE	100P	0.01	GND
FOR OTHER COUNTRTES	SHORT	NONE	0.01	GND	NONE	NONE	NONE



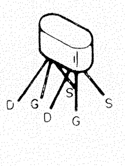
2SA1015(Y.GR)
Q901~908.953.954
2SC1775AV(E.F)
Q803
2SA872AV(D.E)
Q804
2SC2240(GR)
Q207.208.807
2 SC2235(O.Y)
Q808.951
2SC1775AV(F1)
Q955.956



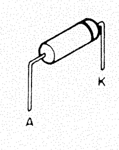
2SK246(GR)
Q203~206.801.802



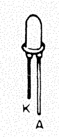
2SD313V(D.E)
Q805
2SB507V(D.E)
Q806



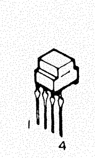
2SK240(GR)
Q201.202



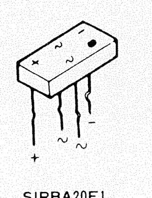
1S2473
D201~204
D702~705
D902~928
D503.504
10E2FD-1
D802



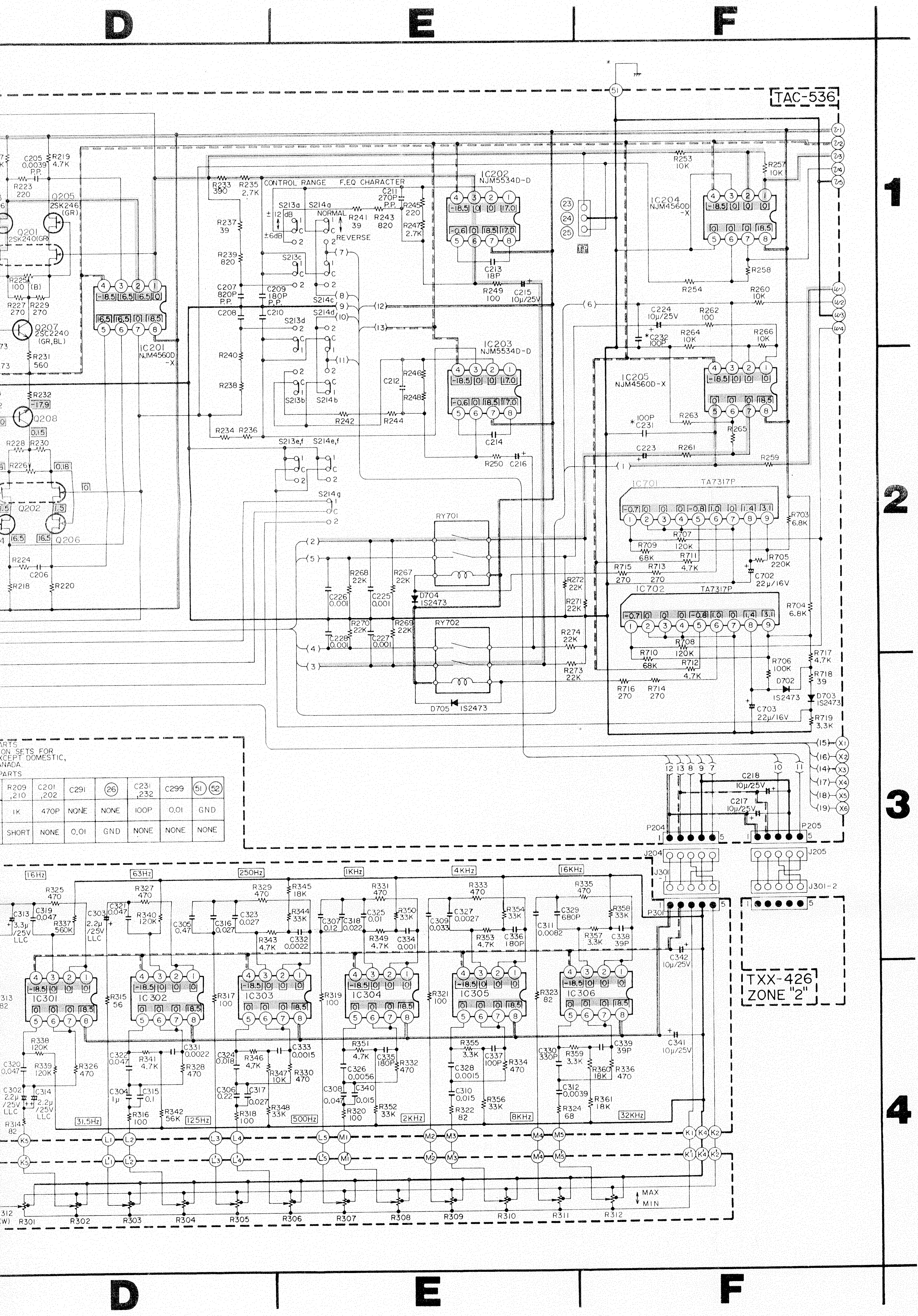
TLR-143
D957
TLG-143(E.F)
D958



SLF-5022
D955.956



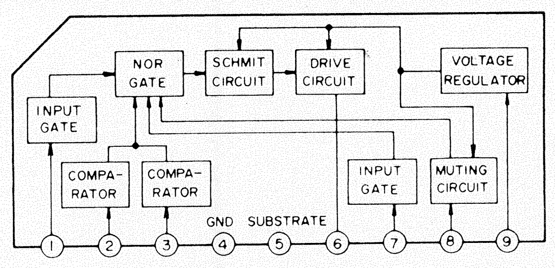
SIRBA20F1
D801


D
E
F
1
2
3
4
TAC-536
TXX-426
ZONE "2"
CONTROL RANGE
F.EQ CHARACTER
±12dB
±6dB
NORMAL
REVERSE
IC201 NJM4560D-X
IC202 NJM5534D-D
IC203 NJM5534D-D
IC204 NJM4560D-X
IC205 NJM4560D-X
IC701 TA7317P
IC702 TA7317P
RY701
RY702
D704 1S2473
D705 1S2473
D702 1S2473
D703 1S2473
Q201 2SK240(GR)
Q205 2SK246(GR)
Q207 2SC2240 (GR,BL)
Q208
Q202
Q206
P204
P205
J204
J205
J301
J301-2
P301
IC301
IC302
IC303
IC304
IC305
IC306
16Hz
31.5Hz
63Hz
125Hz
250Hz
500Hz
1KHz
2KHz
4KHz
8KHz
16KHz
32KHz
R301
R302
R303
R304
R305
R306
R307
R308
R309
R310
R311
R312
MAX
MIN

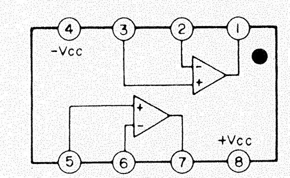
ARTS
ON SETS FOR
XCEPT DOMESTIC,
ANADA
PARTS

R209 ,210	C201 ,202	C291	㉖	C231 ,232	C299	(51) (52)
1K	470P	NONE	NONE	100P	0.01	GND
SHORT	NONE	0.01	GND	NONE	NONE	NONE

TA7317P

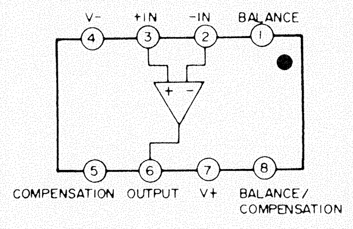

INPUT GATE
NOR GATE
SCHMIT CIRCUIT
DRIVE CIRCUIT
VOLTAGE REGULATOR
COMPA-RATOR
COMPA-RATOR
GND
SUBSTRATE
INPUT GATE
MUTING CIRCUIT
1
2
3
4
5
6
7
8
9

NJM4560D-X

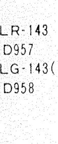

4
3
2
1
-Vcc
+Vcc
5
6
7
8

TOP VIEW

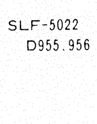
NJM5534D-D


V-
+IN
-IN
BALANCE
4
3
2
1
5
6
7
8
COMPENSATION
OUTPUT
V+
BALANCE/ COMPENSATION

TOP VIEW



LR-143
D957
LG-143(E.F)
D958



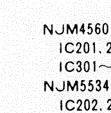
SLF-5022
D955.956

SIRBA20F1
D801

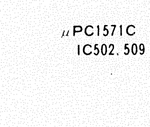
ERGS8XK-104
RA901

ERGS6XK-104
RA902~904

TA7317P
IC701.702

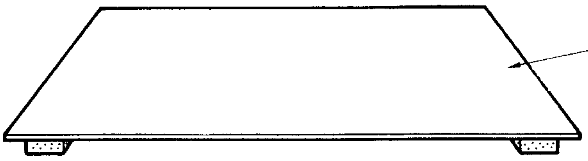


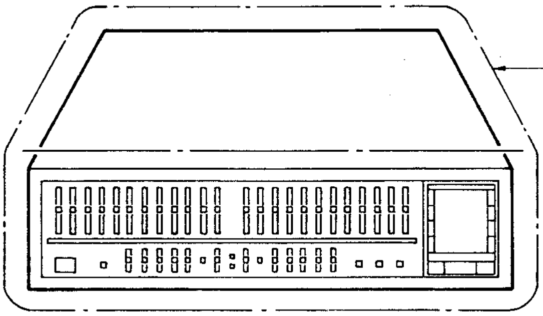
NJM4560-D-X
IC201.204.205
IC301~306
NJM5534D-D
IC202.203
MN3007
IC505.506
MN3101
IC504
AN6552
IC501.507.508
IC510~516

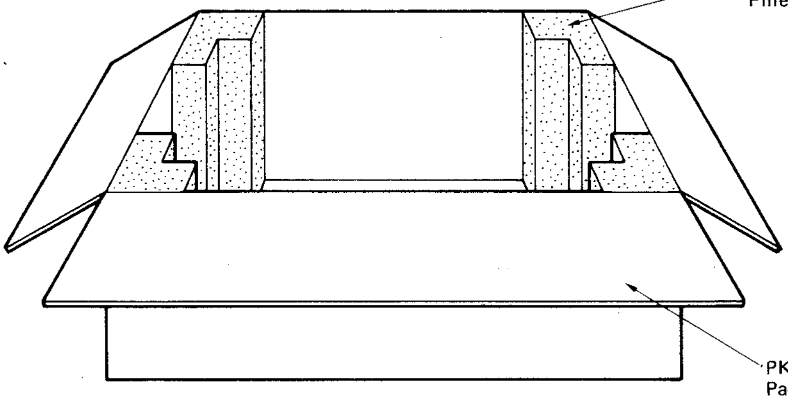


μPC1571C
IC502.509

12. Packing Materials and Part Numbers


E35435-018
Sheet Ass'y


E36997-018
Protect Sheet


NZ-SEAR7E
Fillers
PK-SEAR7E
Packing Case

13. Accessories List

Item No.	Description	U.S.A. & (Canada)	Europe & (Australia)	West Germany	U. K.	U. S. Military Market & (Other Countries)
1	Instruction Book	E30580-1092A (")	E30580-1092A (")	E30580-1092A	E30580-1092ABS	E30580-1092A (")
2	Signal Cord	E03479-001B (")	E03479-001B (")	E03479-001B	E03479-001B	E03479-001B (")
3	Warranty Card	BT20048 (BT20025F)	— (BT20029C)	BT20057	BT20013C	BT20048 (—)
4	Service Information Card	BT20046A (—)	— (—)	BT20054-006A (FTZ Infor.)	—	BT20046A (—)
5	Safety Instruction	BT20044D (—)	—	—	—	—
6	Envelope (for Inst. & Other parts)	E41202-2 (")	E41202-2 (")	E41202-2	E41202-2	E41202-2 (")

14. Parts List with Specified Numbers for Designated Areas

Item No.	Description	U. S. A. & (Canada)	Europe & (Australia)	West Germany	U. K.	U. S. Military Market (& Other Countries)
1	Power Transformer ⚠	ETP1020-06JA	ETP1020-06HA	ETP1020-06HA	ETP1020-06HABS	ETP1020-06HA
2	Power Switch ⚠	QSP1110-308	QSP1110-305	QSP1110-305	QSP1110-305BS	QSP1110-305
3	Insulator (for TXX-429)	–	E70061-002	E70061-002	E70061-002	–
4	Fuse (F001) ⚠	QMF61U1-R50	QMF51A2-R315L	QMF51A2-R315L	QMF51A2-R315LBS	QMF51A2-R315L
5	Fuse (F801, F802) ⚠	QMF61UI-R80	QMF51A2-R80L	QMF51A2-R80L	QMF51A2-R80LBS	QMF51A2-R80L
6	Power Cord ⚠	QMP1200-200 (QMP1900-200)	QMP3900-200 (QMP2560-244)	QMP3900-200	QMP9017-008BS	QMP7600-250
7	Cord Stopper ⚠	QHS3876-162	QHS3876-162	QHS3876-162	QHS3876-162BS	QHS3876-162
8	P. C. Board Ass'y	TAC-536B	TAC-536B	TAC-536C	TAC-536B	TAC-536B
9	P. C. Board Ass'y ⚠	–	TPS-266C	TPS-266C	TPS-266DBS	TPS-266C
10	P. C. Board Ass'y	TXX-427B	TXX-427C	TXX-427D	TXX-427C	TXX-427C
11	P. C. Board Ass'y	TXX-428B	TXX-428C	TXX-428C	TXX-428C	TXX-428C
12	P. C. Board Ass'y ⚠	TXX-429B	TXX-429D	TXX-429D	TXX-429EBS	TXX-429C
13	Mask Plate	–	E65494-003	E65494-003	E65494-003	–
14	Rear Panel	E24298-001	E24298-002	E24298-002	E24298-002	E24298-002
15	Spacer	E69589-002 (–)	–	–	–	–
16	Insulator (for TPS-266)	–	E301850-001	E301850-001	E301850-001	–
17	DIN Socket Ass'y	–	E03623-003	E03623-003	–	E30623-003
18	Voltage Selector ⚠	–	QSR0074-001	–	QSR0074-001BS	QSR0074-001
19	AC Socket ⚠	QMC0437-002	–	–	–	QMC0437-002
20	Mask Plate	–	E65494-003	E65494-003	E65494-003	–

⚠: Safety Parts

JVC

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